S1000D Sample Publication
Mountain bicycle, Mountain storm Mk1, Brook trekker Mk9

Mountain bicycle manual
BIKE

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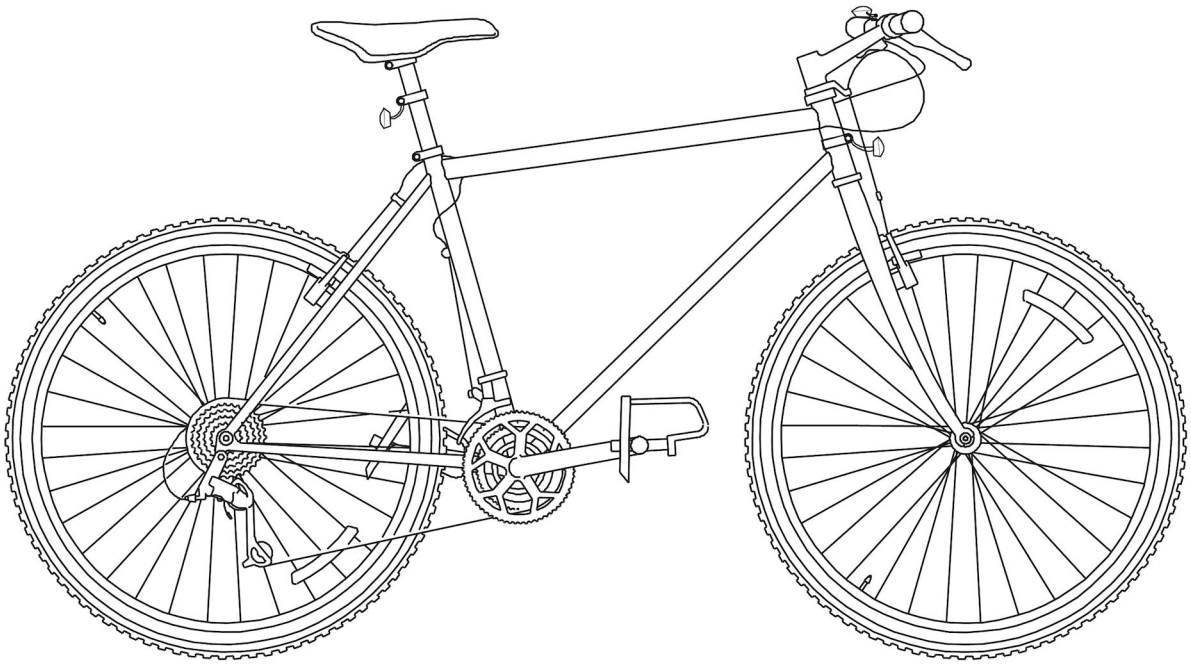

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List of effective data modules

The LOEDM reflects the status of the data modules used within this publication. The following are the status definitions:

- If the DM is new from the prior release of the publication, an “N” indicates that the data module has been added to the publication since the last release of the publication.
- If the DM is unchanged from the prior release of the publication, the entry is left blank.
- If the DM is changed from the prior release of the publication, a “C” indicates that the data module existed in the previous revision of the publication and has experienced a content change.

Data Module Title	Data Module Code	Issue Number	Issue Date	Status
Bicycle - Title page	S1000DBIKE-AAA-D00-00-00-00AA-001A-A	003	2025-04-02	N
Bicycle - Table of contents	S1000DBIKE-AAA-D00-00-00-00AA-009A-A	002	2016-12-31	N
Bicycle - List of effective data modules	S1000DBIKE-AAA-D00-00-00-00AA-002A-A	003	2023-06-21	N
Bicycle - List of Abbreviations	S1000DBIKE-AAA-D00-00-00-00AA-005A-A	001	2022-03-16	N
Bicycle - Description of how it is made	S1000DBIKE-AAA-D00-00-00-00AA-041A-A	010	2016-12-31	N
Bicycle - Description of function	S1000DBIKE-AAA-D00-00-00-00AA-042A-A	009	2016-12-31	N
Bicycle - Description attributed to crew	S1000DBIKE-AAA-D00-00-00-00AA-043A-A	009	2016-12-31	N
Bicycle - Pre-operation procedures (crew)	S1000DBIKE-AAA-D00-00-00-00AA-121A-A	010	2024-02-29	N
Lights - Manual test	S1000DLIGHTING-AAA-D00-00-00-00AA-341A-A	008	2016-12-31	N
Bicycle - Riding a bicycle	S1000DBIKE-AAA-D00-00-00-00AA-130A-A	004	2016-12-31	N
Bicycle - Normal operation procedures (crew)	S1000DBIKE-AAA-D00-00-00-00AA-131A-A	009	2016-12-31	N
Bicycle - Post-operation procedures (crew)	S1000DBIKE-AAA-D00-00-00-00AA-151A-A	009	2016-12-31	N
Bicycle - Other procedures to clean	S1000DBIKE-AAA-D00-00-00-00AA-258A-A	009	2016-12-31	N
Bicycle - Other procedures to clean	S1000DBIKE-AAA-D00-00-00-00AA-258B-A	002	2016-12-31	N
Bicycle - Place on test stand	S1000DBIKE-AAA-D00-00-00-00AA-330A-A	009	2016-12-31	N

Data Module Title	Data Module Code	Issue Number	Issue Date	Status
Bicycle - Standard repair procedures	S1000DBIKE-AAA-D00-00-00-00AA-663A-A	010	2016-12-31	N
Inner tube - Remove and install a new item	S1000DBIKE-AAA-DA0-10-10-00AA-921A-A	008	2016-12-31	N
Tire - Fill with air	S1000DBIKE-AAA-DA0-10-20-00AA-215A-A	008	2016-12-31	N
Tire - Check pressure	S1000DBIKE-AAA-DA0-10-20-00AA-362B-A	008	2016-12-31	N
Tire - Remove and install a new item	S1000DBIKE-AAA-DA0-10-20-00AA-921A-A	008	2016-12-31	N
Chain - Clean with chain cleaning fluid	S1000DBIKE-AAA-DA4-10-00-00AA-251B-A	008	2016-12-31	N
Chain - Oil	S1000DBIKE-AAA-DA4-10-00-00AA-241A-A	009	2016-12-31	N
Hubs - Clean with degreasing agent	S1000DBIKE-AAA-DA5-20-00-00AA-251C-A	009	2016-12-31	N
Frame - Description of how it is made	S1000DBIKE-AAA-DA3-00-00-00AA-041A-A	008	2016-12-31	N
Fork - Manual test	S1000DBIKE-AAA-D00-00-01-00AA-341A-A	002	2016-12-31	N
Fork - Remove procedures	S1000DBIKE-AAA-D00-00-01-00AA-520A-A	002	2016-12-31	N
Fork - Install procedures	S1000DBIKE-AAA-D00-00-01-00AA-720A-A	002	2016-12-31	N
Fork - Install procedures	S1000DBIKE-AAA-D00-00-01-00AB-720A-A	002	2016-12-31	N
Fork - Replacement procedure	S1000DBIKE-AAA-D00-00-01-00AA-933A-A	002	2016-12-31	N
Bicycle axis - Modification procedures	S1000DBIKE-AAA-D00-00-01-00AA-93AA-A	002	2016-12-31	N
Wheel - Description of how it is made	S1000DBIKE-AAA-DA0-00-00-00AA-041A-A	009	2016-12-31	N
Rear wheel - Remove procedures	S1000DBIKE-AAA-DA0-20-00-00AA-520A-A	008	2016-12-31	N
Front wheel - Remove procedures	S1000DBIKE-AAA-DA0-30-00-00AA-520A-A	002	2016-12-31	N
Front wheel - Install procedures	S1000DBIKE-AAA-DA0-30-00-00AA-720A-A	002	2016-12-31	N
Brake system - Description of how it is made	S1000DBIKE-AAA-DA1-00-00-00AA-041A-A	008	2016-12-31	N

Data Module Title	Data Module Code	Issue Number	Issue Date	Status
Brake system - Manual test	S1000DBIKE-AAA-DA1-00-00-00AA-341A-A	008	2016-12-31	N
Brake pads - Clean with rubbing alcohol	S1000DBIKE-AAA-DA1-10-00-00AA-251A-A	008	2016-12-31	N
Front brake - Remove procedures	S1000DBIKE-AAA-DA1-20-00-00AA-520A-A	002	2016-12-31	N
Front brake - Install procedures	S1000DBIKE-AAA-DA1-20-00-00AA-720A-A	002	2016-12-31	N
Steering - Description of how it is made	S1000DBIKE-AAA-DA2-00-00-00AA-041A-A	009	2016-12-31	N
Stem - Remove procedures	S1000DBIKE-AAA-DA2-10-00-00AA-520A-A	009	2016-12-31	N
Stem - Install procedures	S1000DBIKE-AAA-DA2-10-00-00AA-720A-A	009	2016-12-31	N
Handlebar - Remove procedures	S1000DBIKE-AAA-DA2-20-00-00AA-520A-A	009	2016-12-31	N
Handlebar - Install procedures	S1000DBIKE-AAA-DA2-20-00-00AA-720A-A	009	2016-12-31	N
Headset - Description of how it is made	S1000DBIKE-AAA-DA2-30-00-00AA-041A-A	008	2016-12-31	N
Headset - Remove procedures	S1000DBIKE-AAA-DA2-30-00-00AA-520A-A	009	2016-12-31	N
Headset - Install procedures	S1000DBIKE-AAA-DA2-30-00-00AA-720A-A	009	2016-12-31	N
Spacer - Install procedures	S1000DBIKE-AAA-DA2-40-00-00AA-720A-A	002	2016-12-31	N
Gears - Description of how it is made	S1000DBIKE-AAA-DA5-00-00-00AA-041A-A	008	2016-12-31	N
Mechs - Description of how it is made	S1000DBIKE-AAA-DA5-10-00-00AA-041A-A	008	2016-12-31	N
Shifters - Description of how it is made	S1000DBIKE-AAA-DA5-30-00-00AA-041A-A	008	2016-12-31	N
Electrical system - Description of how it is made and its function	S1000DLIGHTING-AAA-D00-00-00-00AA-040A-A	008	2016-12-31	N
Horn - Remove and install a new item	S1000DBIKE-AAA-DA3-10-00-00AA-921A-A	008	2016-12-31	N
Lighting - Assemble, install and connect procedures	S1000DLIGHTING-AAA-D00-00-00-00AA-700A-A	009	2022-06-10	N
Lighting - Remove and install a new item	S1000DLIGHTING-AAA-D00-00-00-00AA-921A-A	008	2016-12-31	N

Data Module Title	Data Module Code	Issue Number	Issue Date	Status
Light system - Illustrated Parts Data - IPD	S1000DLIGHTING-AAA-D00-00-00-01AA-941A-D	008	2016-12-31	N
Bicycle - Illustrated Parts Data - IPD	S1000DBIKE-AAA-D00-00-00-01AA-941A-D	008	2016-12-31	N

List of Abbreviations

Abbreviation	Definition
N/A	N/A

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Section 1 - Introduction

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Section 1.1 Description of how it is made

Description

1.1.1 Physical description of a bicycle

A bicycle (refer to Fig 1) is a frame and a number of movable components with mechanical parts that are completely open. There are no covers or sheet metal panels that prevent access to the mechanical parts. Thus, you can disassemble the different components of a bicycle (refer to Fig 1 [0]) to do:

- an inspection
- a maintenance task
- a repair task

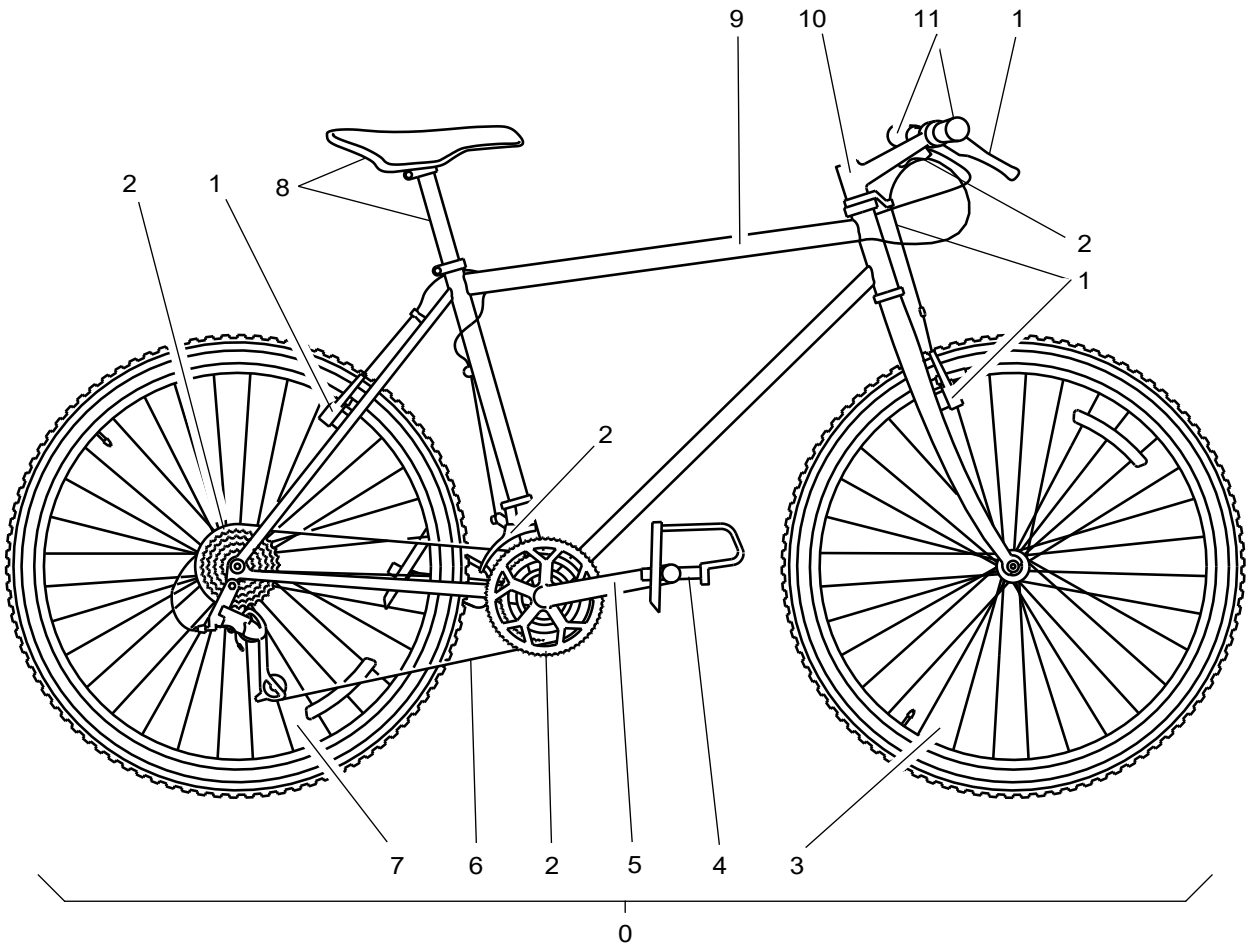

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Figure 1 Complete bicycle

The parts that you can immediately identify on a bicycle are given in Table 1.

Table 1 Bicycle parts

Item	Refer to	Definition
Frame	Fig 1 [9]	A bicycle frame is made of metal tubes that are welded together.
Wheels		The wheels include these parts: - Hub - Spokes - Metal rim - Rubber tire
- Rear wheel	Fig 1 [7]	

Table 1 Bicycle parts (Continued)

Item	Refer to	Definition
- Front wheel	Fig 1 [3]	
Seat and seat post	Fig 1 [8]	These install into the seat tube with a mechanism you can use to change the height.
Handle bars	Fig 1 [11]	A horizontal bar that attaches to the stem with grips at the ends that attach to the brake levers and the shifters.
Handle bar stem	Fig 1 [10]	This attaches the handle bar to the steering tube (head set).
Cranks	Fig 1 [5]	A lever that extends from the bottom of the bracket to the pedal.
Pedals	Fig 1 [4]	The two platforms for the feet that attach to the crank.
Chain	Fig 1 [6]	A circular set of links that connect the chain ring to the cogs on the freewheel.
Gears	Fig 1 [2]	The gears include: - Front chain ring - Rear freewheel - Front and the rear derailleur - Shift lever on the handle bars - Cables
Brakes	Fig 1 [1]	The brakes include: - Actuators on the handlebars - Brake cable - Brake callipers - Brake pads

Section 1.2 Description of function

Description

1.2.1 Functional description of a bicycle

Below is a list of the different bicycle components and a functional description of them.

Frame — The frame is the skeleton of the bicycle. Refer to Sect 4.1 Description of how it is made for a functional description of the frame system.

Wheel — The wheel is the point of contact between the bicycle and the road for the bicycle to have movement. Refer to Sect 6.1 Description of how it is made for a functional description of the wheel.

Spokes	The spokes are thick wires with tension applied that connect the hub to the rim. You can adjust the tension with the nipple on the rim side.
Hub	The hub attaches to the center of the wheel where the axle and the bearings are.
Metal rim	The metal rim is a metal ring that has a U-shaped cross section to hold the spokes on the inner side and the tire on the outer side.
Seat	The seat, which is also known as the "saddle", is used as the support platform for the person to sit on the bicycle.
Seat post	The seat post is used as a support post for the seat and to change the height of the seat for the rider.
Handle bar	The handle bar is a horizontal bar with handles on each end. The handle bar is a steering mechanism that the rider uses to change the direction of the bicycle. The brake levers are also on the handle bar. Refer to Sect 8.3.2 Install procedures for information on how to install the handle bar. Refer to Sect 8.3.1 Remove procedures for information on removing the handlebar.
Handle bar stem	The handle bar stem (the stem) attaches the handle bar to the steering tube. Refer to Sect 8.2.2 Install procedures for information on how to install a stem. Refer to Sect 8.2.1 Remove procedures for information on how to remove the stem.
Brake levers	When you operate the brake lever, the brake pads move against the wheel to decrease the speed. The brake lever on the left side operates the front brake. The brake lever on the right side operates the rear brake.
Brakes	When you operate the brakes, the brake pad moves against the wheel to decrease the speed of the bicycle. Refer to Sect 7.1 Description of how it is made for a description of the braking system.
Shifters	The shifters are the mechanisms that you use to change the gears on the bicycle. There are 7 different types of shifters that have been developed over the years, but they all have the same functionality. When you operate the shifters, they pull the control cable to move the derailleur towards a larger diameter chain ring. The shifters can also loosen the cable to let the derailleur move towards a smaller diameter chain ring. Refer to Sect 9.3 Description of how it is made for a functional description of the shifters.
Crank	The crank moves the power to the chain rings when the pedals operate.
Pedals	The pedals move the force of movement from the feet to the cranks.
Chain	The chain moves the power from the chain rings to the cogs on the freewheel. Refer to Sect 3.2.4.1 Clean with chain cleaning fluid for the procedure on how to clean the chain.
Gears	The gears have different mechanisms that function together to change the speed of the bicycle. These mechanisms include: - the sprockets - the chain - the derailleur

Refer to Sect 9.1 Description of how it is made for a functional description of the gear system.

Chain rings — The chain rings (also known as the "chain wheel") pull on the chain when the cranks turn.

Derailleur — A derailleur moves the chain from one sprocket to another to change the gears. There are two different types of derailleur, the front and the rear. The highest ratio (highest gear) is when the chain is on the largest sprocket on the front and the smallest at the rear. To get the lowest gear, the smallest sprocket is at the front and the largest at the rear. Refer to Sect 9.2 Description of how it is made for a functional description of the derailleur system.

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Section 2 - Crew

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Section 2.1 Description attributed to crew

2.1.1 Introduction

Data about the bicycle and its control system is given in this document. This data will help you operate the bicycle.

2.1.2

2.1.2.1 Controls

Data about the controls that follow is given in this document:

- Steering
- Shifters
- Brakes
- Pedals

2.1.2.2 Steering

The handlebars are used to steer the bike. They are at the front of the bicycle. You hold one of the handlebar grips with each hand and move the handle bar to change the direction of the bike.

2.1.2.3 Shifters

The gears control the ratio of pedal rotation to wheel rotation. You can change this with the shifters Sect 9.3 Description of how it is made . The shifters are on the handlebar.

A description of the two shifters follows.

Table 1 shifter correlation

Shifter Location	Affected Gears
Left	The buttons on the left shifter changes the gears on the front derailleur.
Right	The buttons on the right shifter changes the gears on the rear derailleur.

2.1.2.4 Brakes

WARNING

If you operate the front brake without the rear brake you can cause a crash.

You can decrease the speed of the bike with the brakes. You operate the brakes with the brake levers on the handlebar.

A description of the brake levers follows.

Table 2 brake lever correlation

Brake Lever Location	Affected Brake
Left	This lever operates the front brake.
Right	This lever operates the rear brake.

2.1.2.5 Pedals

The Platform Pedals are at the bottom of the seat tube. You operate the Platform Pedals to move the bicycle forward.

Section 2.2 - Before riding

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Section 2.2.1 Pre-operation procedures (crew)

Preliminary requirements

Required personnel

Table 1 Required personnel

Person	Category	Skill level	Trade/Trade code	Estimated time
Man A	Basic user		Operator	0,3 h

Support equipment

Table 2 Support equipment

Name	Identification/Reference	Quantity	Remark
Tire pressure gauge	Part No. KZ666/BSK-TLST-001-01	1 EA	
Specialist toolset	Part No. KZ666/BSK-TLST-001	1 EA	

Consumables, materials and expendables

Table 3 Consumables, materials and expendables

Name	Identification/Reference	Quantity	Remark
General lubricant	Part No. KZ222/LL-001	As required	

Procedure

1 Examine the condition of the brakes.

1.1 Open the brake quick release.

1.2 Examine the condition and the thickness of the brake pads.

1.2.1 Make sure that there is a large quantity of rubber left.

1.2.2 Make sure that the pad is not too hard.

1.3 Clean all the unwanted material.

2 Do an inspection of the installation of the brakes.

2.1 Check the hydraulic brake system function.

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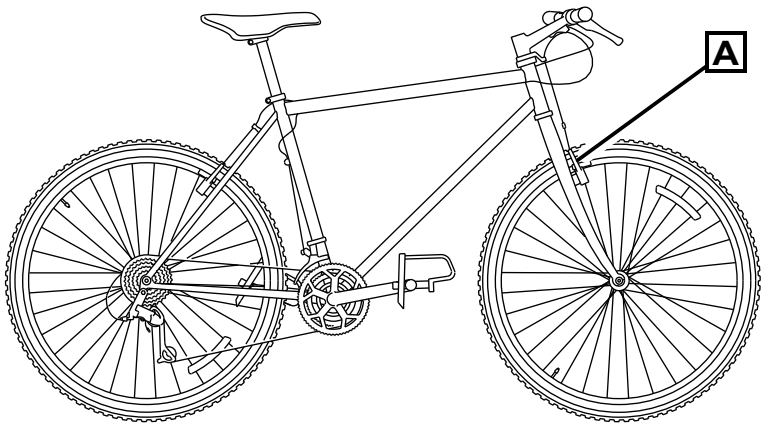
Figure 1 Hydraulic brake system

2.2 Make sure that there is sufficient clearance between the pad and the inner diameter of the brake surface.

2.3

CAUTION

If the position of the pads is too low on the rim, as shown in Fig 2 , the pads can move. This could cause the separation of the spokes from their mountings., they could slip off causing the spokes to be torn out of their mountings.



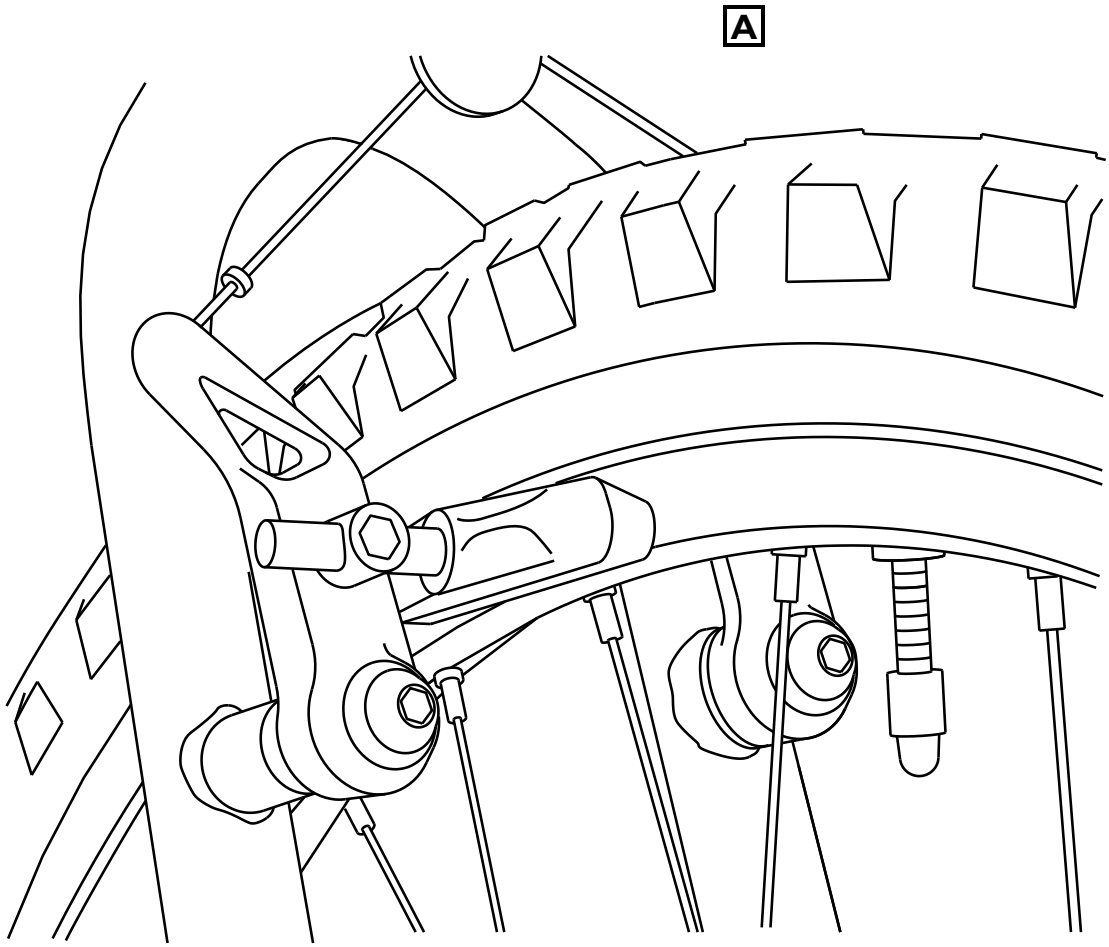


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Figure 2 Brake pad seating

Make sure that the pads are correctly installed in the center of the inner diameter of the brake surface.

3 Do a check of the tire pressure.

3.1 Do a check of the tire pressure with the Tire pressure gauge .

3.2 Compare the value you read with the recommended pressure that is shown into the sidewall of the tire.

3.3 Add the necessary air.

4 Examine the condition of the wheels.

4.1 Examine the rims for bulges and dents.

4.2 Examine for splits at the seam where an extruded rim is bonded.

5 Do a check of the headset bearings.

5.1 Straddle the bicycle.

Apply the front brakes and push the handle bars forward.

5.2 Make sure that the headset bearings are tight.

6 Do the checks on the chain.

6.1 Visually examine the chain.

If the chain is too dirty, clean it as specified in the clean chain task (refer to Sect 3.2.4.1 Clean with chain cleaning fluid).

6.1.1 Visually examine the chain for links that are frozen or that do not move easily.

6.1.2 Apply the necessary General lubricant .

6.2 Do a check of the chain to make sure that it is tight.

6.2.1 Make sure that the play of the chain is not too much.

6.2.1.1 Move the chain on the largest chain ring.

6.2.1.2 Try to pull the chain away from the front of the chain ring.

Make sure that the chain is not loose. Tighten the chain if, when you pull it away from the chain ring, you can see a full tooth.

6.2.2 Tighten the chain with the Allen wrench from the Specialist toolset.

Section 2.2.2 Manual test

Preliminary requirements

Required personnel

Table 4 Required personnel

Person	Category	Skill level	Trade/Trade code	Estimated time
Man A	Basic user		Operator	0,3 h

Procedure

1 Set the lights to on.

2 Make sure that all the lights operate correctly.

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Section 2.3 - Riding a bicycle

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Section 2.3.1 Riding a bicycle

amateur 13

1 Prerequisities

Please make sure you are familiar with the functional description of a bicycle: Sect 1.2 Description of function

Querying the basic user information Enter your name Enter your age 4 100 Did you ever ride a bicycle? Yes experienced No Age must be within 4 to 100 All fields are mandatory experienced 0

1 Introduction

Dear , because you are an unexperienced user, you will be presented a brief introduction on how to operate a bicycle.

2 Click **next**.

Sect 2.1 Description attributed to crew

1 Did you really read the instructions?

Before you can proceed to the practical section of this manual, you will be given a simple question to test whether you read the instructions carefully.

The rear brake is operated by Left brake lever 1 Right brake lever

1 Wrong answer!

You will be given the introduction once again.

Number of mistakes:

1 Correct!

You can now continue with the practical part of this manual.

Practical part

1 Take the bicycle from the garage.

2 Clean the bicycle from the dust.

3 Sit on the bike.

4 ...and RIDE!

Section 2.3.2 Normal operation procedures (crew)

Pre-ride inspection

Brakes

Pads

1. Pads..... Free of unwanted material
2. Pads..... Acceptable pad width
3. Pads..... Acceptable pad clearance

Callipers

1. Link Wire..... Firmly attached

Levers

1. Levers..... Approximately 1 inch of travel before engagement
2. Levers..... Space between lever and handlebar when fully pulled

Cables

1. Cables..... No cuts or fraying

Tires

1. Pressure.....

Table 1 Correlation of tire pressure and terrain

Tire Pressures	Min	Max
Off Road	35lbs	40lbs
On Road	55lbs	60lbs

2. Tires..... No cracks or splits

Wheels

1. Wheels..... No loose bearings
2. Wheels..... True
3. Spokes..... Not broken

Spokes not broken

4. Spokes..... Tight

5. Axel Nuts..... Tight

Headset

1. Headset bearings..... Tight

Chain

1. Links..... Easy movement of links

Handlebar

WARNING

Do not ride with a cracked stem

Stem cracked

1. Replace stem

Stem is loose

1. Tighten stem

Handlebars twist in stem

2. Tighten clamp bolt

Computer

1. Computer Display.....

ALTITUDE	0 miles
SPEED	0 mph
DISTANCE	0 miles
SPEED	0 mph
DISTANCE	0 miles

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Section 2.4 - After riding

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Section 2.4.1 Post-operation procedures (crew)

Preliminary requirements

Support equipment

Table 1 Support equipment

Name	Identification/Reference	Quantity	Remark
Specialist toolset	Part No. KZ666/BSK-TLST-001	1 EA	

Consumables, materials and expendables

Table 2 Consumables, materials and expendables

Name	Identification/Reference	Quantity	Remark
General lubricant	Part No. KZ222/LL-001	As required	

Procedure

1 Clean the bicycle.

1.1 Clean the bicycle with water.

1.2 Use the brush from the Specialist toolset to clean the brakes, the shift levers, the sprockets and the tires.

1.3 Let the bicycle dry.

2 Lubricate the bicycle

2.1 Spray the General lubricant, to these moving parts:

the brake pivots

the derailleur pivots

the derailleur tension guides

the brake lever pivots

the control cables

the gear sprockets

the chain

2.2 Remove the lubricant which is more than the necessary.

Section 3

General servicing

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Section 3.1 - Cleaning

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Section 3.1.1 Other procedures to clean

Common information

3.1.1.1 According to The International Bikers' Association (IBA) code of honor you are kindly requested to drive a properly maintained bicycle, which means the bike has to be regularly cleaned.

Preliminary requirements

Required conditions

Table 1 Required conditions

Action/Condition	Data Module/Technical Publication
The bicycle is outdoors	

Required personnel

Table 2 Required personnel

Person	Category	Skill level	Trade/Trade code	Estimated time
Man A	Chemical technician	Intermediate	Bike cleaner	1,0 h

Required personnel

Table 3 Required personnel

Person	Category	Skill level	Trade/Trade code	Estimated time
Applicability:				
Mountain bicycle Mountain storm Mk1				
Man B	Operator	Intermediate	Bike rider	1,0 h

Required personnel

Table 4 Required personnel

Person	Category	Skill level	Trade/Trade code	Estimated time
Applicability:				
Mountain bicycle Brook trekker Mk9				
Man B	Operator	Advanced	Bike rider	0,8 h

Required technical information

Table 5 Required technical information

Document No.	Title	Category
S1000DBIKE-B6865-SAFE1-00	Safety Handbook - Greasy Bikes	Publication module (PM)
SafeS-12-156B Issue Number 2014	, Sticky stuff - Safety sheet	Safety sheet

Support equipment

Table 6 Support equipment

Name	Identification/Reference	Quantity	Remark
Water hose	Part No. KZ666/BSK-TLST-001-09	1 EA	
Stiff bristle brush	Part No. KZ666/BSK-TLST-001-02	1 EA	
Sponge	Part No. KZ666/BSK-TLST-001-11	1 EA	

Consumables, materials and expendables

Table 7 Consumables, materials and expendables

Name	Identification/Reference	Quantity	Remark
ACME super 45 Agent/Degreasing agent	Part No. KZ222/LL-004	1 L	
ACME Middling Detergent 69/ Detergent A	Part No. KZ666/BSK-TLST-023-14	1 L	
Applicability:			
Mountain bicycle Brook trekker Mk9			
BoeBus DeLux Detergent No.6/ Detergent C	Part No. KZ666/BSK-TLST-001-15	1 L	

Safety conditions

WARNINGS

- **Do not get Detergent A into your eyes. If it gets into your eyes, wash them immediately in clean warm water.**

Applicability:

Mountain bicycle Brook trekker Mk9

- **Do not get Detergent C into your eyes. If it gets into your eyes, wash them immediately in clean warm water.**

CAUTIONS

- **Do not use a Water hose that has high pressure. A water hose that has high pressure can cause some parts to become loose or full of water.**

- **Do not point the hose directly at the hub or at the bottom bracket bearings. This can cause damage to the parts.**

Applicability:

Mountain bicycle Brook trekker Mk9

- **Apply Detergent C in accordance with the instruction on the container. The substance may cause damage to the Bike paint if it is not applied correctly.**

Procedure

1 Clean the bicycle with water to remove all dirt. Refer to Fig 1.

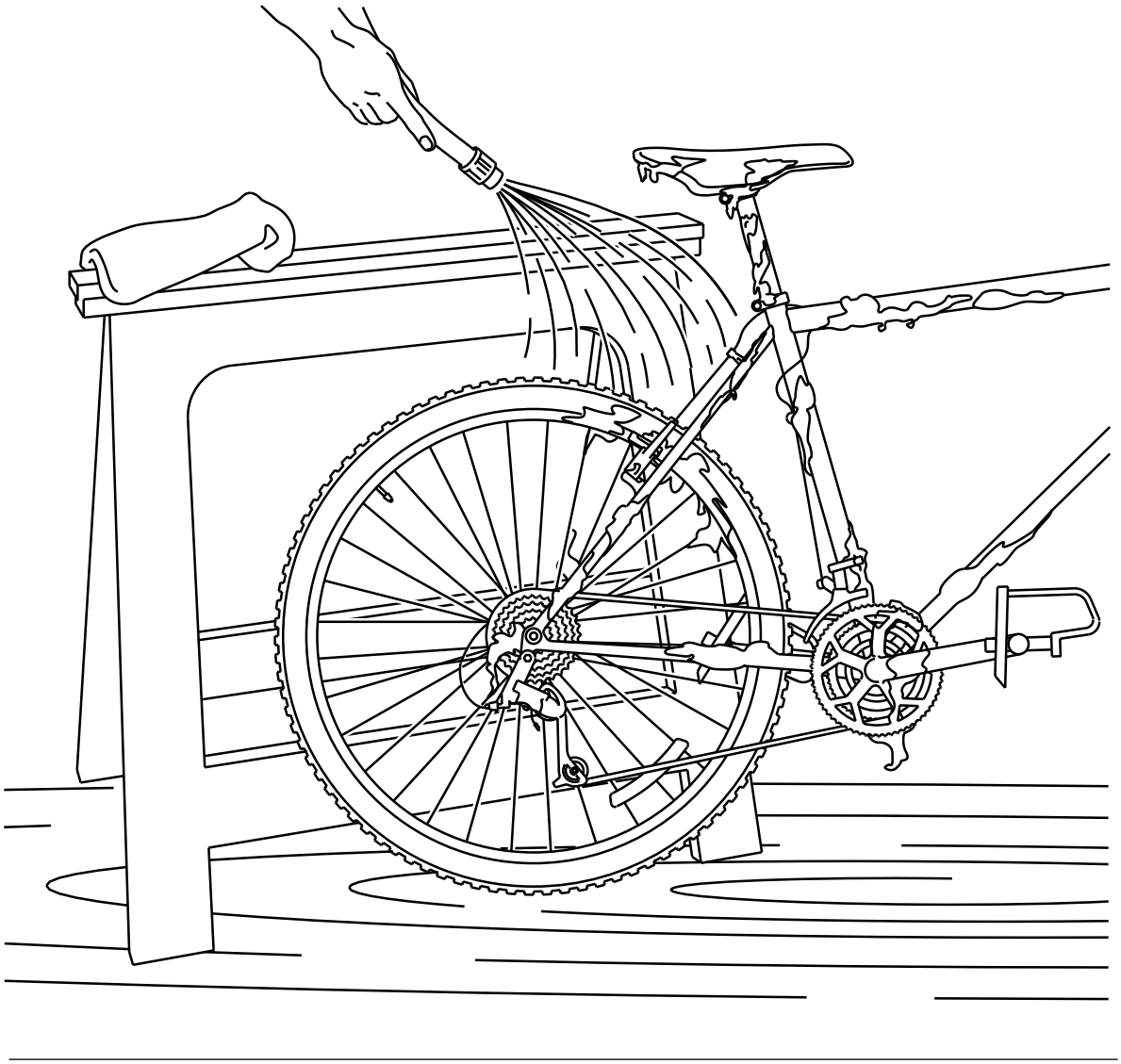

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Figure 1 Cleaning the bike

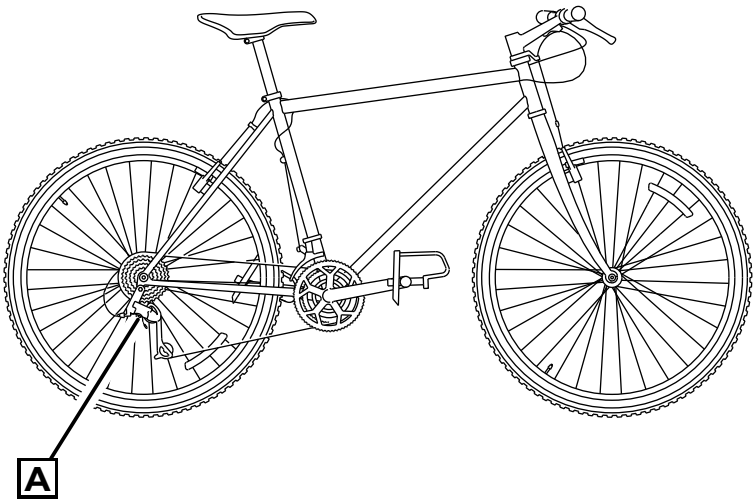
2 Use a Stiff bristle brush to get access to areas that are not easy to clean. These are the shift levers, the knobbly tires, and the brakes.

3 Clean the caked grime from the chain and the sprockets with a screwdriver that has a small blade.

4 Remove the grease from the freewheel assembly with the Degreasing agent as shown in Fig 2.

Use a brush to remove the grease from these parts:

- sprockets
- guide and tension wheels of the derailleur
- chain ring teeth



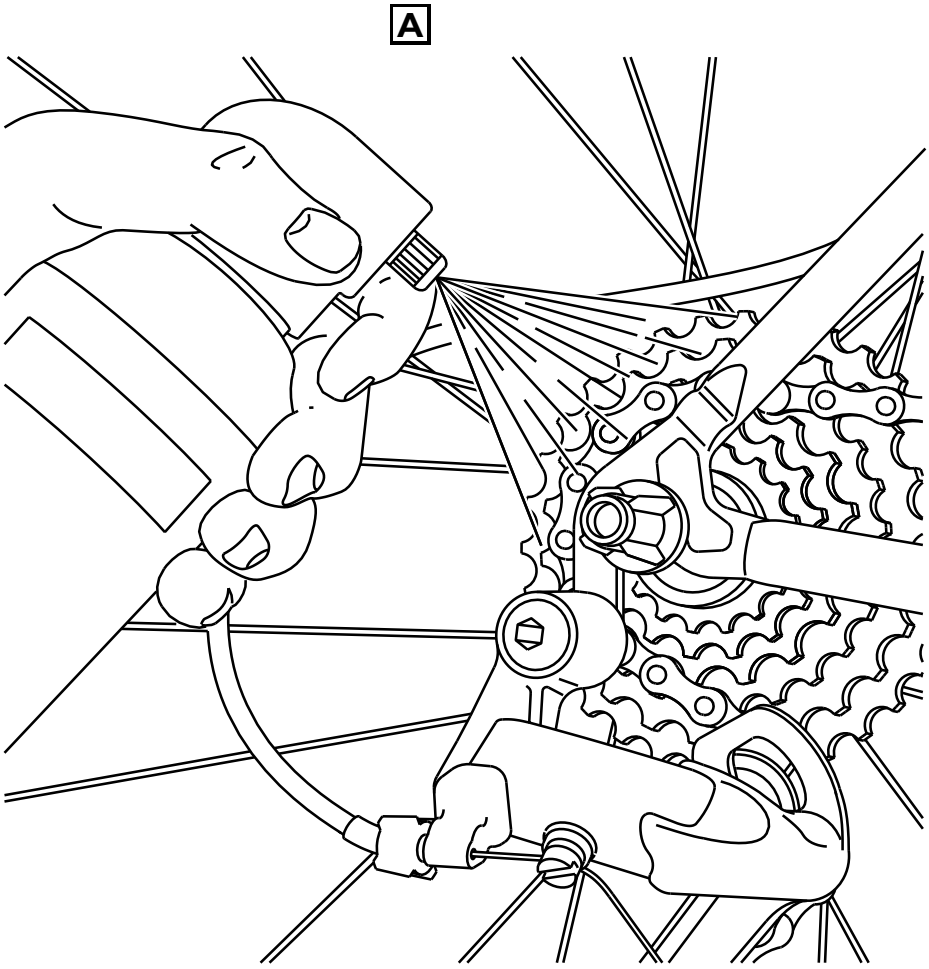


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Figure 2 Degreasing the freehub

5	Flush the sprockets, the derailleurs, the chain rings and the chain with water.
	Note If necessary, do the flush procedure again.
6	Wash the Bike
6.1	Soak the Sponge into Detergent A and water.
6.2	Clean the bicycle with the soaked sponge.
6.3	Flush the bicycle and make sure that all Detergent A is removed.
6.4	Move the bicycle up and down on its tires to remove all water.
7	Wash the Bike
7.1	Soak the Sponge into Detergent C and water.
7.2	Clean the bicycle with the soaked sponge.
7.3	Soak the Sponge into Detergent A and water.
7.4	Fully clean the bicycle with the soaked sponge.
7.5	Flush the bicycle to make sure that all detergents are removed.
7.6	Move the bicycle up and down on its tires to remove all water.
8	Lubricate the bicycle. Refer to Sect 3.2.4.2 Oil.

Requirements after job completion

Required conditions

Table 8 Required conditions

Action/Condition	Data Module/Technical Publication
Make sure the bicycle is dry	

Section 3.1.2 Other procedures to clean

Common information

3.1.2.1 According to The International Bikers' Association (IBA) code of honor you are kindly requested to drive a properly maintained bicycle, which means the bike has to be regularly cleaned.

Preliminary requirements

Required conditions

Table 9 Required conditions

Action/Condition	Data Module/Technical Publication
The bicycle is outdoors	

Required personnel

Table 10 Required personnel

Person	Category	Skill level	Trade/Trade code	Estimated time
Man A	Chemical technician	Intermediate	Bike cleaner	1,0 h

Required personnel

Table 11 Required personnel

Person	Category	Skill level	Trade/Trade code	Estimated time
Applicability:				
Mountain bicycle Mountain storm Mk1				
Man B	Operator	Intermediate	Bike rider	1,0 h

Required personnel

Table 12 Required personnel

Person	Category	Skill level	Trade/Trade code	Estimated time
Applicability:				
Mountain bicycle Brook trekker Mk9				
Man B	Operator	Advanced	Bike rider	0,8 h

Required technical information

Table 13 Required technical information

Document No.	Title	Category
S1000DBIKE-B6865-SAFE1-00	Safety Handbook - Greasy Bikes	Publication module (PM)
SafeS-12-156B Issue Number 2014	, Sticky stuff - Safety sheet	Safety sheet

Support equipment

Table 14 Support equipment

Name	Identification/Reference	Quantity	Remark
Water hose	Part No. KZ666/BSK-TLST-001-09	1 EA	
Stiff bristle brush	Part No. KZ666/BSK-TLST-001-02	1 EA	
Sponge	Part No. KZ666/BSK-TLST-001-11	1 EA	

Consumables, materials and expendables

Table 15 Consumables, materials and expendables

Name	Identification/Reference	Quantity	Remark
ACME super 45 Agent/Degreasing agent	Part No. KZ222/LL-004	1 L	
ACME Middling Detergent 69/ Detergent A	Part No. KZ666/BSK-TLST-023-14	1 L	
Applicability:			
Mountain bicycle Brook trekker Mk9			
BoeBus DeLux Detergent No.6/ Detergent C	Part No. KZ666/BSK-TLST-001-15	1 L	

Safety conditions

WARNINGS

- **Do not get Detergent A into your eyes. If it gets into your eyes, wash them immediately in clean warm water.**

Applicability:

Mountain bicycle Brook trekker Mk9

- **Do not get Detergent C into your eyes. If it gets into your eyes, wash them immediately in clean warm water.**

CAUTIONS

- **Do not use a Water hose that has high pressure. A water hose that has high pressure can cause some parts to become loose or full of water.**
- **Do not point the hose directly at the hub or at the bottom bracket bearings. This can cause damage to the parts.**

Applicability:

Mountain bicycle Brook trekker Mk9

- **Apply Detergent C in accordance with the instruction on the container. The substance may cause damage to the Bike paint if it is not applied correctly.**

Procedure

1 Clean the bicycle with water to remove all dirt. Refer to Fig 3.

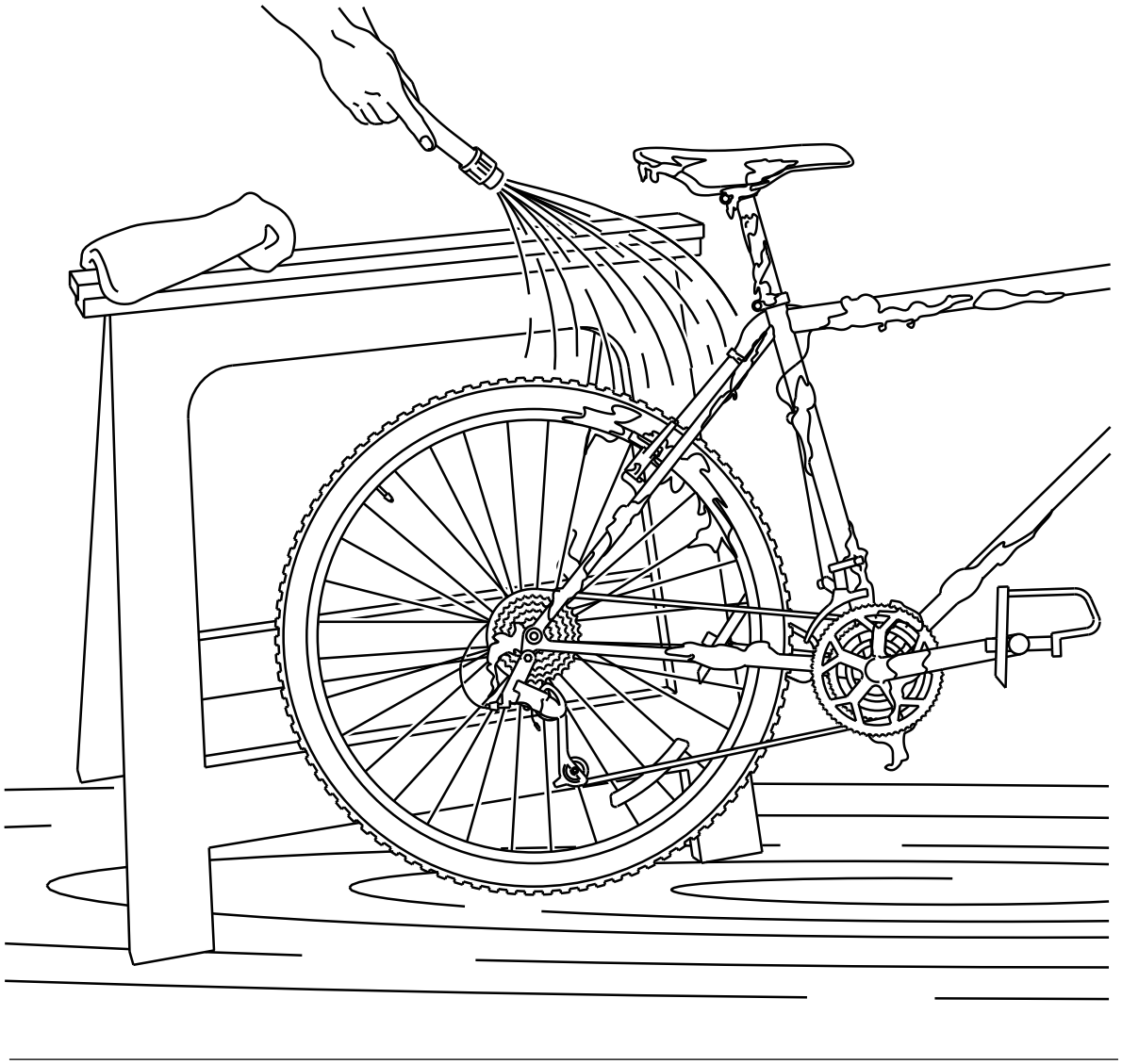

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Figure 3 Cleaning the bike

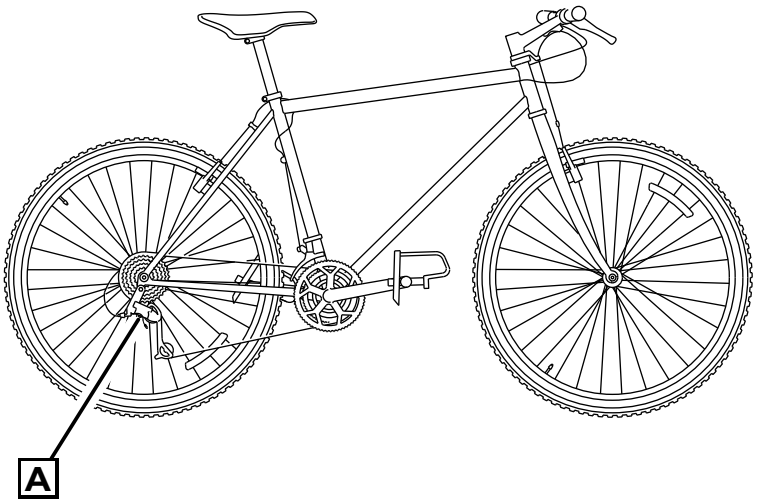
2 Use a Stiff bristle brush to get access to areas that are not easy to clean. These are the shift levers, the knobbly tires, and the brakes.

3 Clean the caked grime from the chain and the sprockets with a screwdriver that has a small blade.

4 Remove the grease from the freewheel assembly with the Degreasing agent as shown in Fig 4.

Use a brush to remove the grease from these parts:

- sprockets
- guide and tension wheels of the derailleur
- chain ring teeth



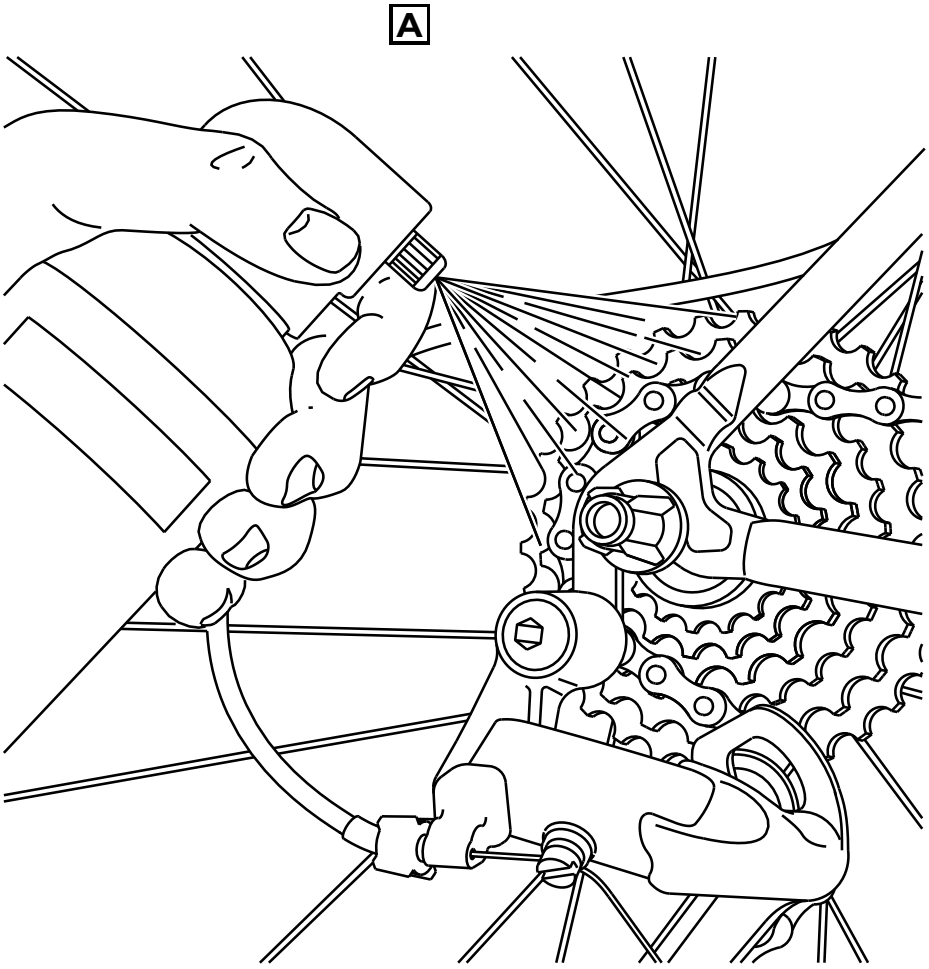


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Figure 4 Degreasing the freehub

5	Flush the sprockets, the derailleurs, the chain rings and the chain with water.
	Note
	If necessary, do the flush procedure again.
6 [ALT]	Wash the Bike
6.1	Soak the Sponge into Detergent A and water.
6.2	Clean the bicycle with the soaked sponge.
6.3	Flush the bicycle and make sure that all Detergent A is removed.
6.4	Move the bicycle up and down on its tires to remove all water.
6 [ALT]	Wash the Bike
6.1	Soak the Sponge into Detergent C and water.
6.2	Clean the bicycle with the soaked sponge.
6.3	Soak the Sponge into Detergent A and water.
6.4	Fully clean the bicycle with the soaked sponge.
6.5	Flush the bicycle to make sure that all detergents are removed.
6.6	Move the bicycle up and down on its tires to remove all water.
7	Lubricate the bicycle. Refer to Sect 3.2.4.2 Oil.

Requirements after job completion

Required conditions

Table 16 Required conditions

Action/Condition	Data Module/Technical Publication
Make sure the bicycle is dry	

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Section 3.2 - Common maintenance

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Section 3.2.1 Place on test stand

Preliminary requirements

Required personnel

Table 1 Required personnel

Person	Category	Skill level	Trade/Trade code	Estimated time
Man A	Basic user		Operator	0,3 h

Support equipment

Table 2 Support equipment

Name	Identification/Reference	Quantity	Remark
Test stand	Part No. KZ666/BSK-TLST-999-01	1 EA	

Procedure

1 Ensure Test stand is level.

2 Place bicycle on the test stand.

3 Tight clamps until bicycle is securely attach to the test stand.

Section 3.2.2 Standard repair procedures

Preliminary requirements

Required personnel

Table 3 Required personnel

Person	Category	Skill level	Trade/Trade code	Estimated time
Man A	Operator	Basic	Bike rider	0,5 h

Support equipment

Table 4 Support equipment

Name	Identification/Reference	Quantity	Remark
Tire lever	Part No. KZ666/BSK-TLST-001-04	1 EA	
Foot pump	Part No. KZ666/BSK-TLST-001-05	1 EA	
Marker pen	Part No. KZ666/BSK-TLST-001-07	1 EA	
Tube patch kit	Part No. KZ666/BSK-TLST-001-07	1 EA	

Spares

Table 5 Spares

Name	Identification/Reference	Quantity	Remark
Inner-tube	Part No. KT222/IT-001	1 EA	

Safety conditions

CAUTION

When you remove the rear wheel to repair a puncture, disconnect the brake arm from the chain stay.

Procedure

1 Remove the rear wheel. (Refer to Sect 6.2.1 Remove procedures)

2 Make sure that there is no air in the tube.

2.1 Loosen the cap on the valve stem.

2.2 Push the valve stem core down to bleed all the air.

3 Use a Tire lever to move the tire bead out of its seat. Lift the tire bead above the lip of the rim.

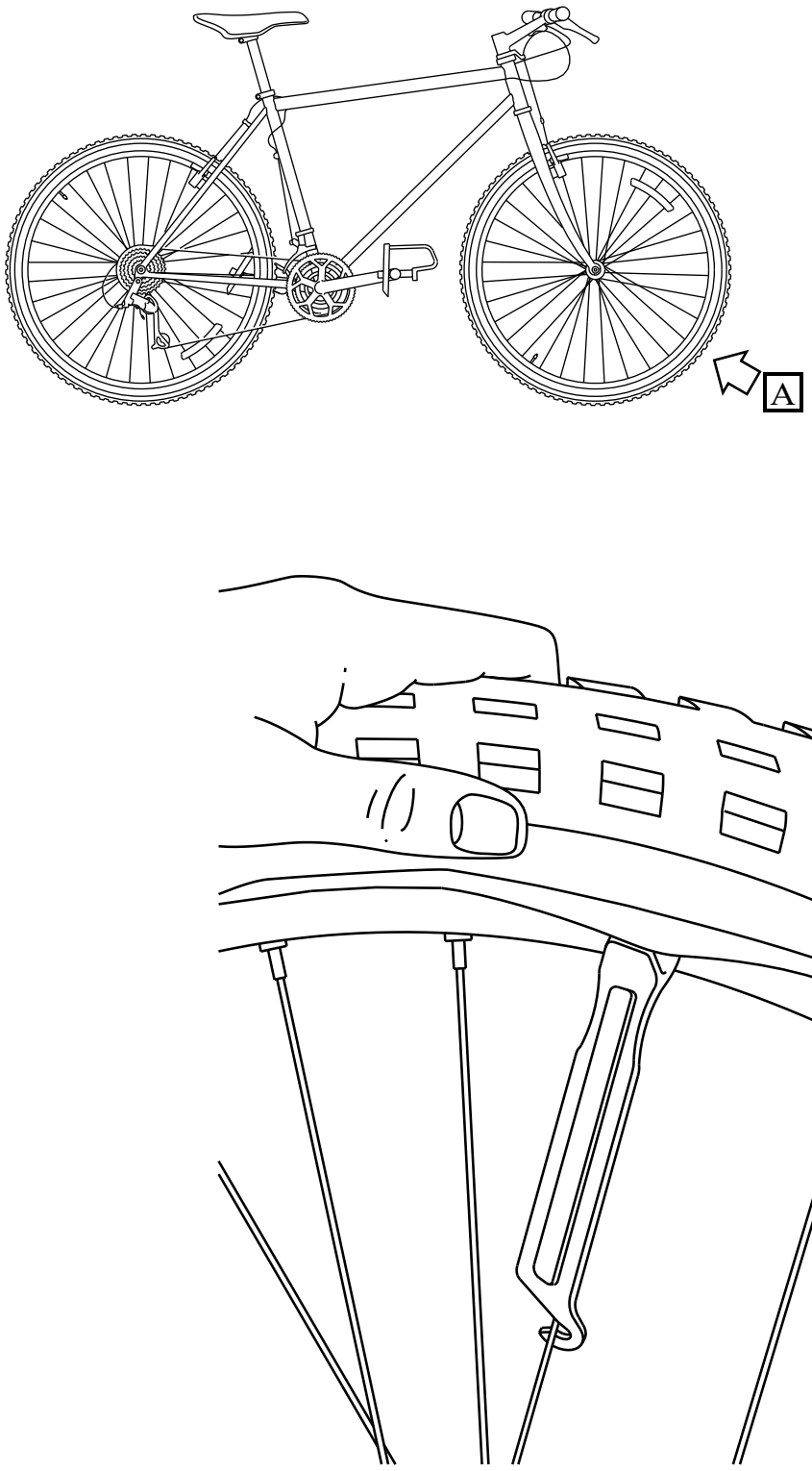

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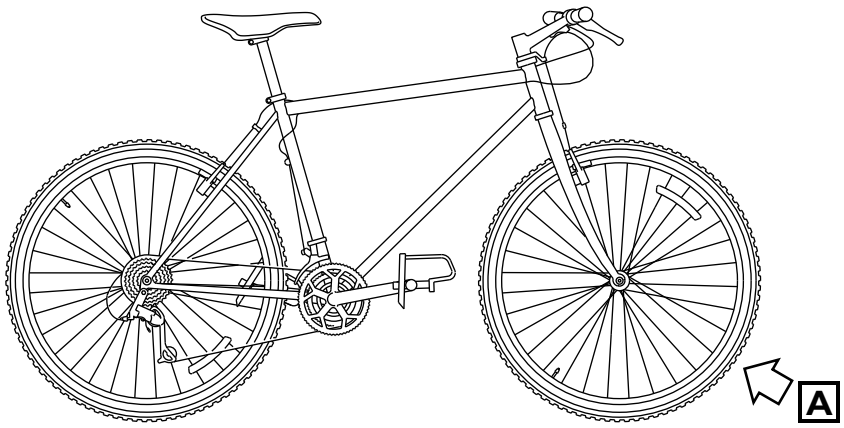
Figure 1 Unseating the tire with a tire lever

4 Remove the tube.

5 Inflate (not fully) the tube with the Foot pump. Examine the tube for leaks.

6 If you find a leak, identify it with a circle made with a Marker pen.



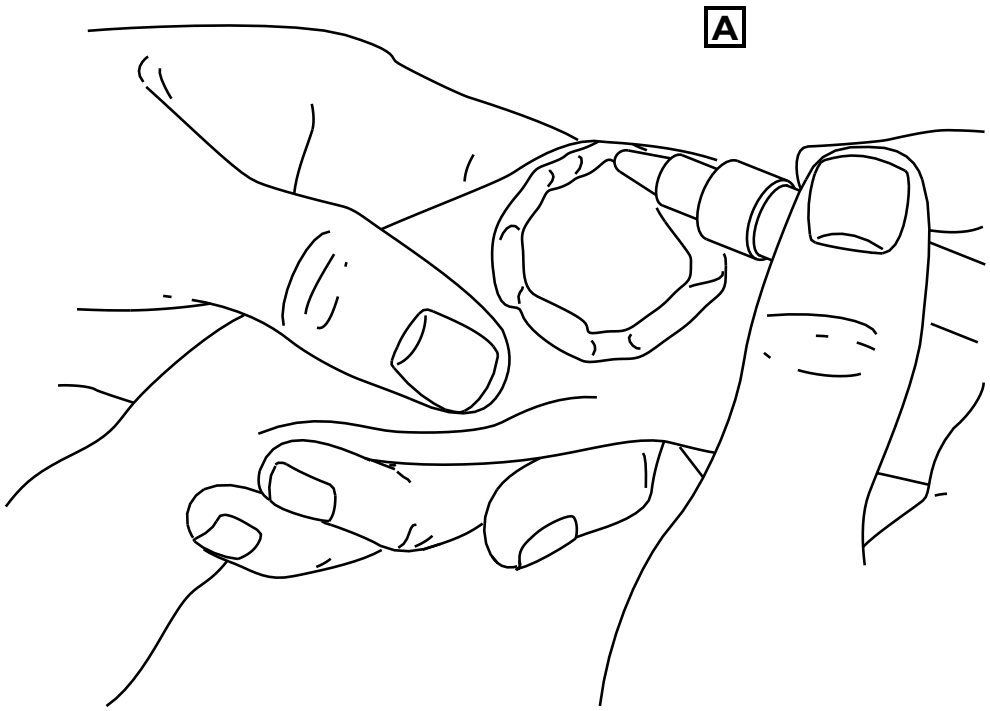


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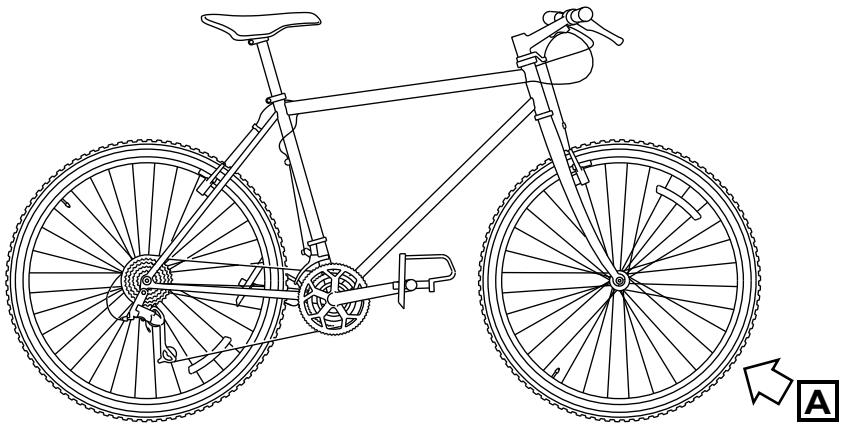
Figure 2 Circle leak

7 Release most of the air.

8 Use a piece of sandpaper from the Tube patch kit and make the area on and around the hole rough. This will help the patch bond correctly.



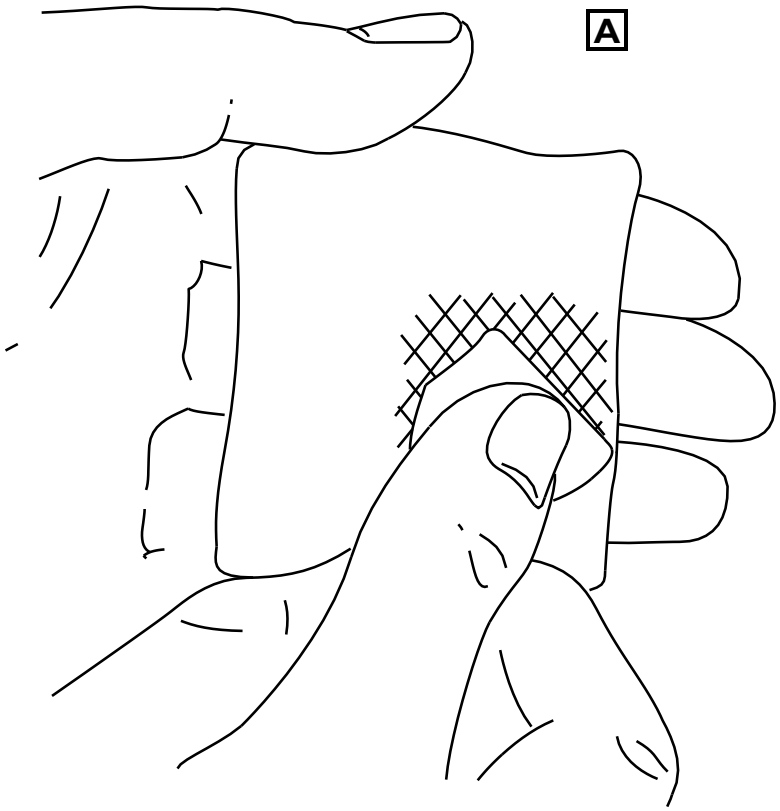


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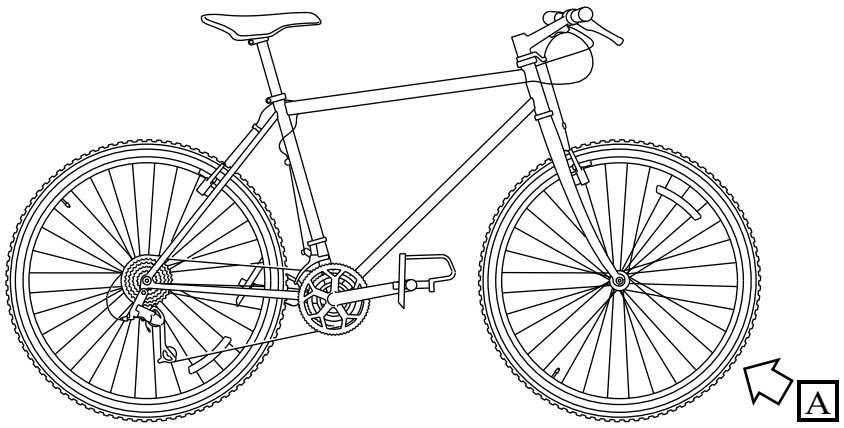
Figure 3 Sanding the application area

9 Apply a thin layer of glue from the patch kit on and around the hole. Make sure that the area with the glue is larger than the patch.



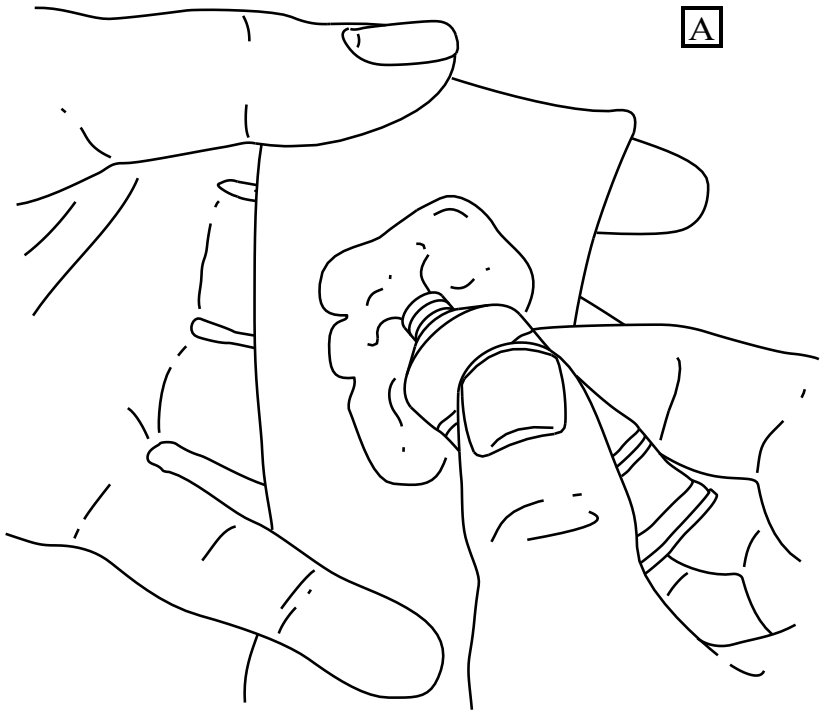


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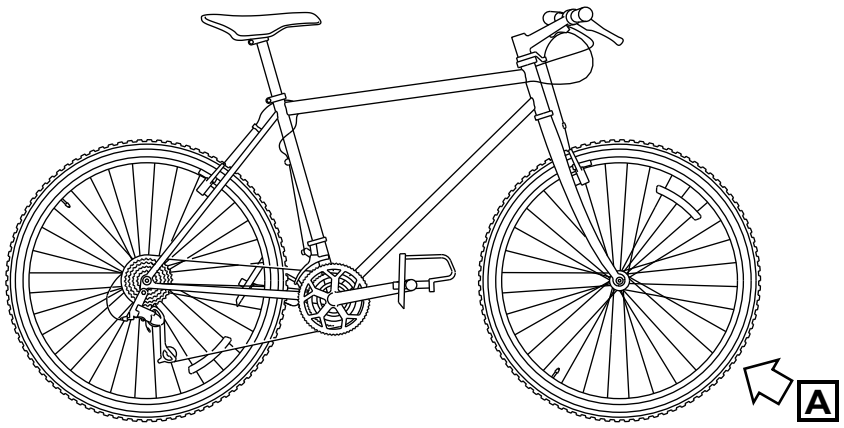
Figure 4 Apply glue to application area

10 Let the glue dry for five minutes until it becomes tacky and dim.

11 Remove the rear foil from the patch (that is a part of the patch kit) and push the patch in its position.

12 Push with your thumbs from the center of the patch to the outer part of the applied area.



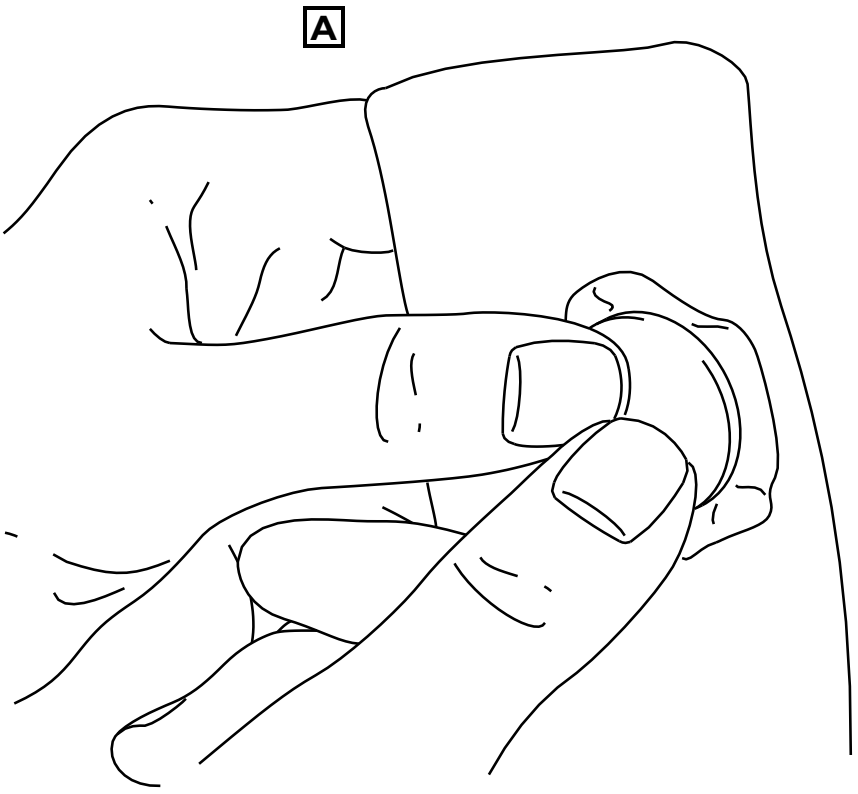


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Figure 5 Apply pressure to tube

13 Remove the thin cover from the patch.

14 Put a very thin layer of talcum powder on and around the patch.

15 Inflate (not fully) the repaired tube with the foot pump.

16 Start at the valve stem and install the tube again between the tire and the rim.

17 Push the valve stem through the hole in the rim.

18 Make sure that the valve stem is straight.

19 Install the remaining of the tire.

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Section 3.2.3 - Tires and tubes

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Section 3.2.3.1 Remove and install a new item

Preliminary requirements

Required conditions

Table 1 Required conditions

Action/Condition	Data Module/Technical Publication
The tire is removed.	S1000DBIKE-AAA-DA0-10-20-00AA-215A-A

Required personnel

Table 2 Required personnel

Person	Category	Skill level	Trade/Trade code	Estimated time
Man A	Basic user		Operator	0,3 h

Spares

Table 3 Spares

Name	Identification/Reference	Quantity	Remark
Inner tube	Part No. KT222/IT-001	1 EA	

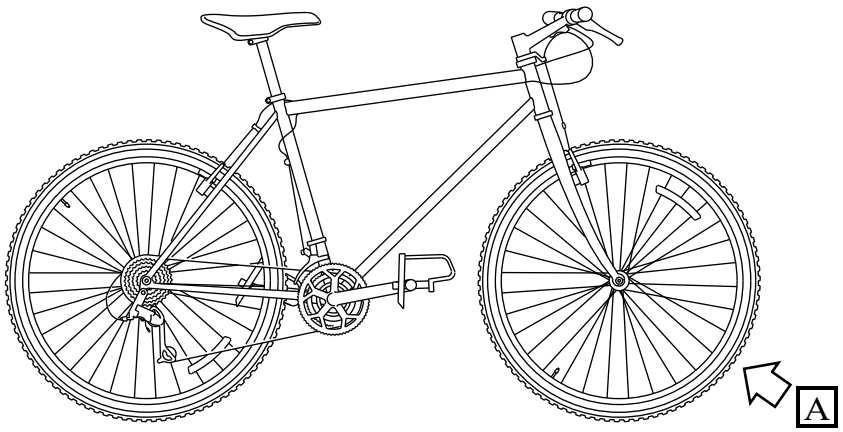
Safety conditions

CAUTION

Be careful with sharp or hard tools. They can cause damage to the inner tube.

Procedure

1 Remove the old inner-tube.



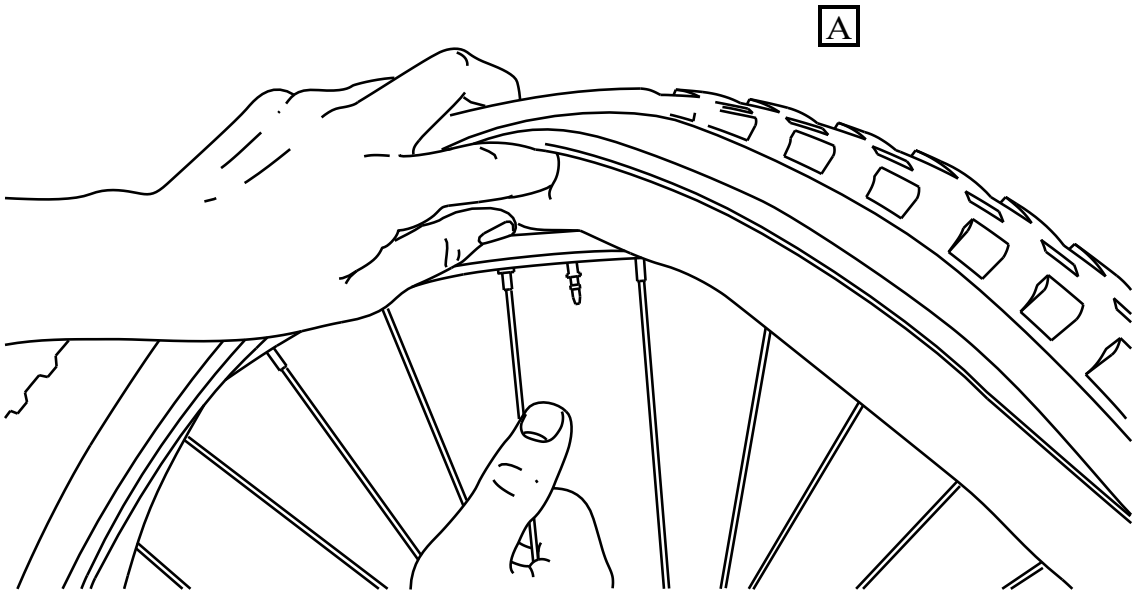


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Figure 1 Removing the inner tube

2 Install the new Inner tube.

Requirements after job completion

Required conditions

Table 4 Required conditions

Action/Condition	Data Module/Technical Publication
Replace the tire.	
Inflate the tire with air.	S1000DBIKE-AAA-DA0-10-20-00AA-215A-A

Section 3.2.3.2 Fill with air

Preliminary requirements

Required personnel

Table 5 Required personnel

Person	Category	Skill level	Trade/Trade code	Estimated time
Man A	Basic user		Operator	

Support equipment

Table 6 Support equipment

Name	Identification/Reference	Quantity	Remark
Specialist toolset	Part No. KZ666/BSK-TLST-001	1 EA	
Foot pump	Part No. KZ666/BSK-TLST-001-05	1 EA	
Tire pressure gauge	Part No. KZ666/BSK-TLST-001-01	1 EA	

Procedure

1 Ensure bicycle is on the repair stand.

2 Locate the deflated tire.

3 Attach the outlet valve of the Foot pump, from the Specialist toolset, to the valve of the deflated tire.

4 Inflate the tire.

4.1 Operate the foot pump to pump air into the tire.

4.2 Check tire pressure. Refer to - Check pressure

Section 3.2.3.3 Check pressure

Preliminary requirements

Required personnel

Table 7 Required personnel

Person	Category	Skill level	Trade/Trade code	Estimated time
Man A	Basic user		Operator	0,3 h

Support equipment

Table 8 Support equipment

Name	Identification/Reference	Quantity	Remark
Tire pressure gauge	Part No. KZ666/BSK-TLST-001-01	1 EA	

Procedure

1 Locate the valve stem of tire.

2 Use the tire pressure gauge (Tire pressure gauge) to check the tire pressure.

3 Tire pressure should between 2000 hPa to 2700 hPa.

3.1 If tire pressure is less than 2000 hPa inflate tire. Refer to - Fill with air

3.2 If the tire cannot maintain pressure or the tire pressure is greater than 2700 hPa replace the inner tube. Refer to - Remove and install a new item

Section 3.2.3.4 Remove and install a new item

Preliminary requirements

Required personnel

Table 9 Required personnel

Person	Category	Skill level	Trade/Trade code	Estimated time
Man A	Basic user		Operator	0,3 h

Support equipment

Table 10 Support equipment

Name	Identification/Reference	Quantity	Remark
Specialist toolset	Part No. KZ666/BSK-TLST-001	1 EA	
Tire lever	Part No. KZ666/BSK-TLST-001-04	1 EA	
Tire pressure guage	Part No. KZ666/BSK-TLST-001-01	1 EA	

Spares

Table 11 Spares

Name	Identification/Reference	Quantity	Remark
Tire	Part No. KT666/TIRES-010101	1 EA	

Procedure

1 Lift and turn the bicycle and make sure the bicycle is held safely in this position.

2 Use a standard wrench from the Specialist toolset and loosen the brake caliper.

3 Remove the axle bolt.

4 Remove the wheel.

5 Deflate the tire.

6 Use the Tire lever from the Specialist toolset and remove the old tire from the wheel.

7 Use the Tire lever from the Specialist toolset and attach the new Tire to the wheel. Refer to Sect 6.1 Description of how it is made

8 Inflate the tire (refer to - Fill with air).

9 Install the wheel.

10 Tighten the axle bolt.

11 Tighten the brake caliper.

Requirements after job completion

Required conditions

Table 12 Required conditions

Action/Condition	Data Module/Technical Publication
Lift and turn the bicycle to the correct position.	
Do a test of the brakes as given in the brake test procedure.	S1000DBIKE-AAA-DA1-00-00-00AA-341A-A

Section 3.2.4 - Chain

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Section 3.2.4.1 Clean with chain cleaning fluid

Preliminary requirements

Support equipment

Table 1 Support equipment

Name	Identification/Reference	Quantity	Remark
Stiff bristle brush	Part No. KZ666/BSK-TLST-001-02	1 EA	

Table 1 Support equipment (Continued)

Name	Identification/Reference	Quantity	Remark
Chain cleaning fluid	Part No. KZ222/LL-003	As required	
Chain cleaning tool	Part No. KZ666/BSK-TLST-001-03	1 EA	

Consumables, materials and expendables

Table 2 Consumables, materials and expendables

Name	Identification/Reference	Quantity	Remark
Floor covering	Part No. KK999/PPP-001	1 pack	
General lubricant	Part No. KZ222/LL-001	As required	

Procedure

1 Inspect the chain.

Do the inspection of the chain as given in the pre-ride checks (refer to Sect 2.2.1 Pre-operation procedures (crew)).

2 Prepare the cleaning area.

2.1 Put the Floor covering on a satisfactory floor area.

2.2 Put the bicycle on the floor covering.

3 Clean debris from the chain.

3.1 Use the Stiff bristle brush and loosen as much unwanted material as possible.

3.2 Make sure that you remove all the unwanted material from the chain.

4 Clean the chain.

4.1 Open the Chain cleaning tool and fill with the Chain cleaning fluid.

4.2 Move the chain to the middle chainring and the middle sprocket at the rear.

4.3 Put the chain in the chain guides of the chain cleaning tool and lock the tool on the chain.

4.4 Hold the tool with the left hand and slowly turn the rearwards with the right hand.

4.5 Press the button on the cleaning tool to make sure that cleaning fluid flows until the tool is empty.

4.6 If necessary, remove the unwanted chain cleaning fluid.

5 Lubricate the chain.

5.1 Use the General lubricant and lubricate the chain.

5.2 Unlock and remove the cleaning tool.

5.3 If necessary, remove the unwanted lubricant.

Requirements after job completion

Required conditions

Table 3 Required conditions

Action/Condition	Data Module/Technical Publication
Move the bicycle to its storage area and remove the floor covering.	

Section 3.2.4.2 Oil

Preliminary requirements

Required conditions

Table 4 Required conditions

Action/Condition	Data Module/Technical Publication
The bicycle chain is clean and dry	

Required personnel

Table 5 Required personnel

Person	Category	Skill level	Trade/Trade code	Estimated time
Man A	Operator	Intermediate	Bike rider	0,5 h

Support equipment

Table 6 Support equipment

Name	Identification/Reference	Quantity	Remark
Clean dry cloth	Part No. KZ666/BSK-TLST-001-12	1 EA	
Floor covering	Part No. KK999/PPP-001	1 pack	

Consumables, materials and expendables

Table 7 Consumables, materials and expendables

Name	Identification/Reference	Quantity	Remark
ACME sticky lube 52B/Wet lube	Part No. KZ222/LL-007	1 dl	

Table 7 Consumables, materials and expendables (Continued)

Name	Identification/Reference	Quantity	Remark
Applicability:			
Dry conditions			
AECMA Heavy duty Oil 1988/Dry lube	Part No. B6865/HD1988	1 dl	

Safety conditions

WARNINGS

- **Wet lube is a very dangerous substance. Do not get it onto your skin. Use it in a well ventilated area. If you swallow it seek immediate medical advice. If it gets into your eyes wash your eyes in clean water and seek medical advice.**

Applicability:

Dry conditions

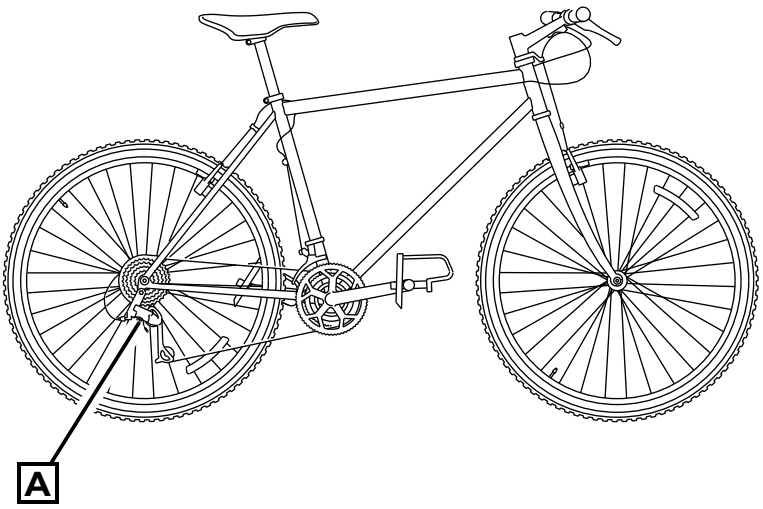
- **Dry lube is a very dangerous substance. Do not get it onto your skin. Use it in a well ventilated area. If you swallow it seek immediate medical advice. If it gets into your eyes wash your eyes in clean water and seek medical advice.**

Procedure

1 Apply the penetrating lubricant into all the parts of the bike that move

1.1 Apply Wet lube to:

- derailleur pivots (refer to Fig 1)
- derailleur tension (refer to Fig 2)



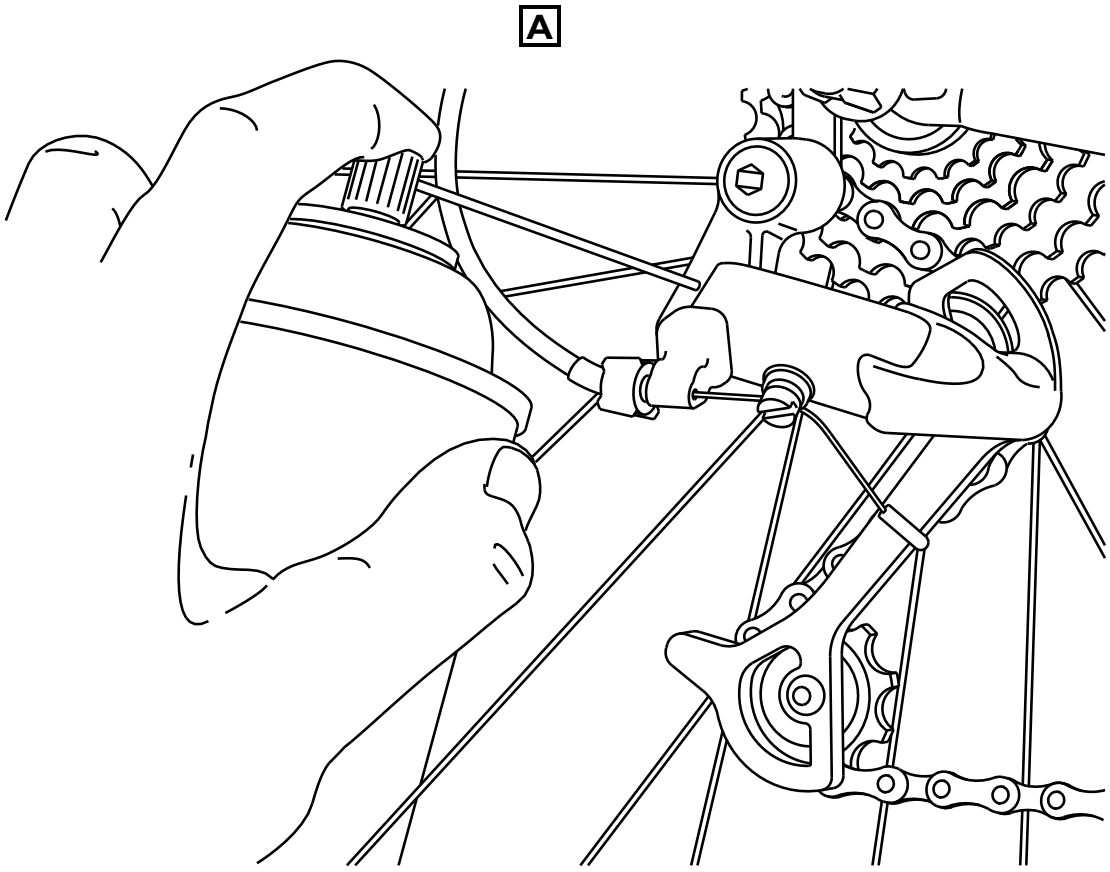


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Figure 1 Derailleur pivots

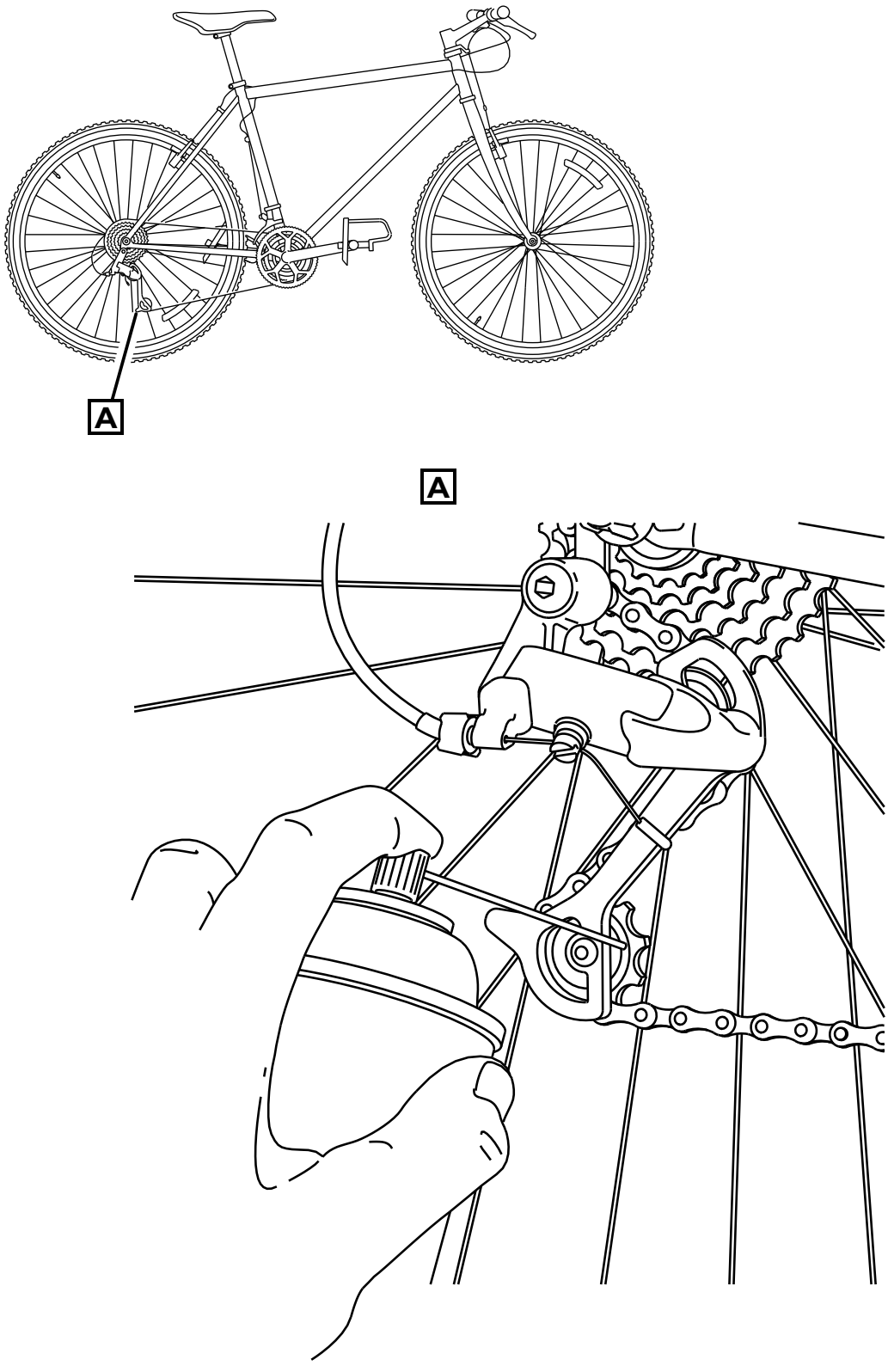

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Figure 2 Derailleur tension

1.2 Apply Wet lube to:

- brake lever pivots (refer to Fig 3)

These brake lever pivots include:

- derailleur pivots
- derailleur tension
- guide wheels
- brake lever pivots
- control cables and where they go into their casings

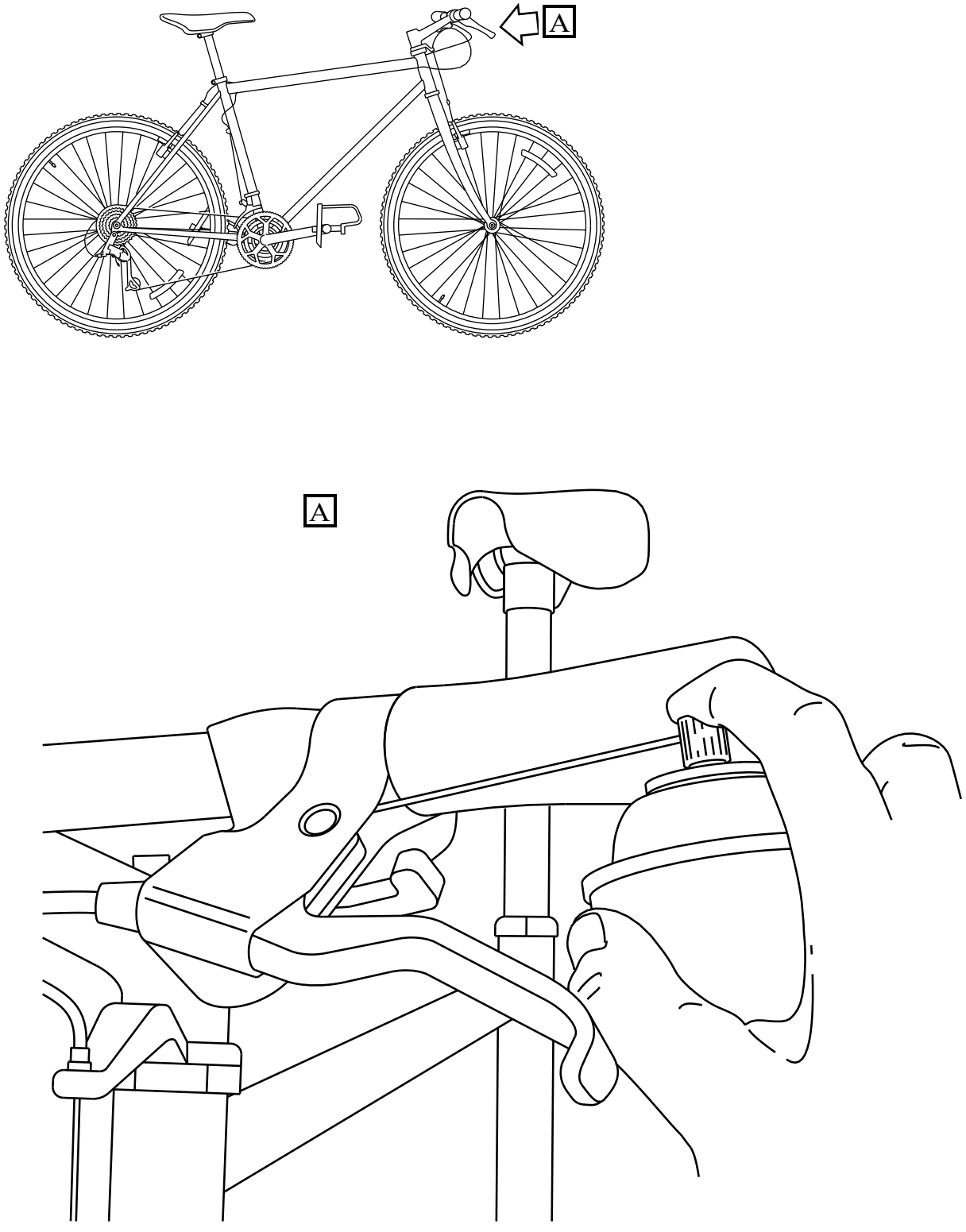

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Figure 3 Brake lever pivots

2 Lubricate the chain

2.1 Make sure the chain is clean and dry.

2.2 Put the Floor covering on the floor below the chain.

2.3 [ALT] Apply the Dry lube to each roller of the chain (refer to Fig 4) but only apply a small quantity.

2.3 [ALT] Apply the Wet lube to each roller of the chain (refer to Fig 4) but only apply a small quantity.

2.4 Hold the nozzle of the container above the front of the chain ring and slowly turn the cranks rearwards.

2.5

CAUTION

Do not get lubrication oil into the brake system. Oil in the break system can affect the efficiency of the bake system. Do not get oil onto the floor where it can easily get transferred onto the brake system.

Let the lubricant soak into chain before you clean the unwanted lubricant from the chain.

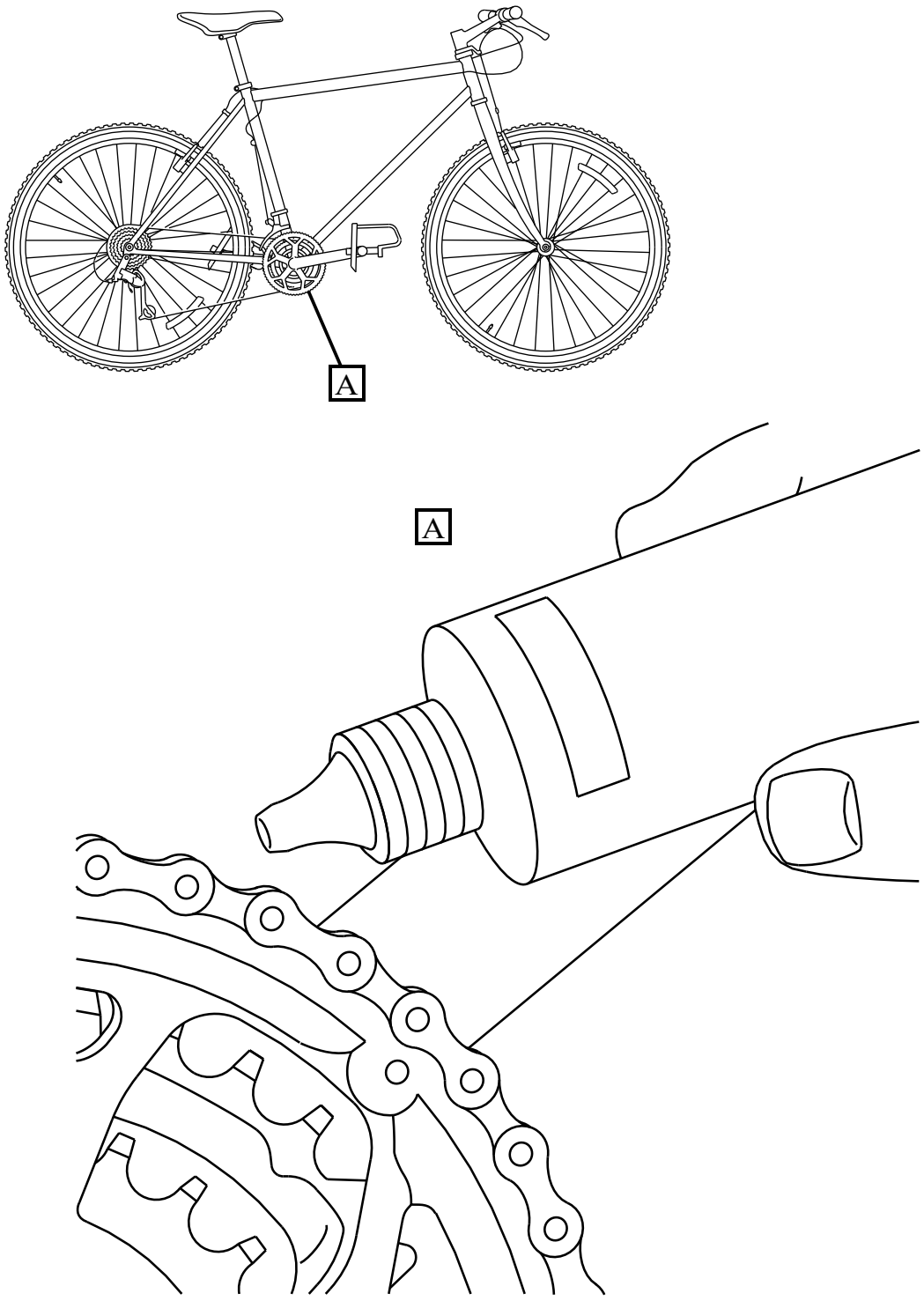

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Figure 4 Lubricate the chain

3 Check lubricated parts

3.1 Do a check of the rear wheel rim and clean the unwanted lubricant if necessary.

3.2 Do a check of the chain to make sure that each link is lubricated. If there are links that do not move easily or have become frozen, lubricate the chain again (refer to Step 2).

3.3 Do a check of the remaining lubricated parts and clean the unwanted lubricant with a Clean dry cloth.

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Section 3.2.5 - Hubs

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Section 3.2.5.1 Clean with degreasing agent

Preliminary requirements

Required conditions

Table 1 Required conditions

Action/Condition	Data Module/Technical Publication
Rear wheel removed	S1000DBIKE-AAA-DA0-20-00-00AA-520A-A

Required personnel

Table 2 Required personnel

Person	Category	Skill level	Trade/Trade code	Estimated time
Man B	Supervisor	Advanced	Bicycle mechanic	0,8 h
Man A	Basic user		Operator	0,3 h

Support equipment

Table 3 Support equipment

Name	Identification/Reference	Quantity	Remark
Specialist toolset	Part No. KZ666/BSK-TLST-001	1 EA	

Consumables, materials and expendables

Table 4 Consumables, materials and expendables

Name	Identification/Reference	Quantity	Remark
Degreasing agent	Part No. KZ222/LL-004	As required	
General grease	Part No. KZ222/LL-005	As required	

Procedure

1 Remove the axle.

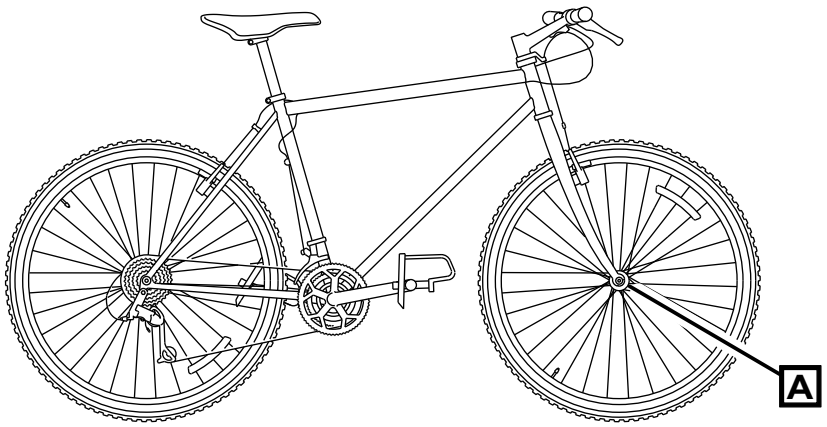
1.1 Use the cone-wrench from the Specialist toolset and remove the locknut from one side of the axle.

1.2 Remove the washer and the cone from the axle.

1.3 **CAUTION**

Make sure you do not lose the bearings from the hub. Be prepared to catch the bearings if they fall out. Missing bearings can cause damage to the hub.

Pull the axle out from the other side as shown in Fig 1 .



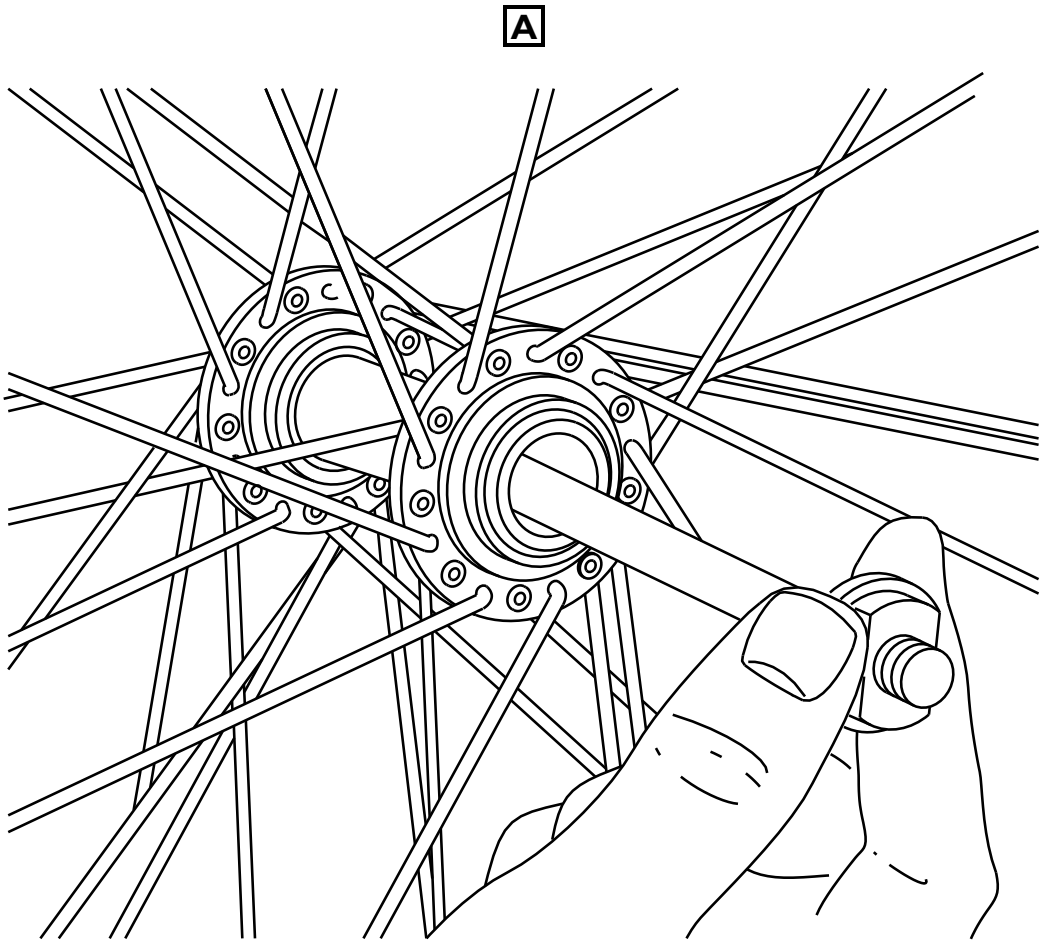


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Figure 1 Removing the axle

2 Remove the bearings.

2.1 Use a small screwdriver from the Specialist toolset and remove the bearings from their races.

2.2 Make sure that each side of the hub has the same number of bearings.

2.3 Use the Degreasing agent and clean all the parts of the hub.

2.4 Do a check of the axle to make sure that it is straight.

2.5 Examine the bearing contact area on the cones and the races in the hub for pitting and other signs of damage.

2.6 Do a check of the ball bearings for signs of damage.

2.7 Apply a large quantity of General grease on each hub race.

3 Assemble the hub.

3.1 Install the ball bearings into the races and push them into the grease.

3.2 Apply more grease on the tops of the bearings.

3.3 Install the axle through the hub.

3.4 Install the cone, the washer and the locknut on the other side of the axle.

3.5 Use the cone-wrench from the specialist toolset and carefully tighten the locknut.

Section 4 - Frame

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List of figures

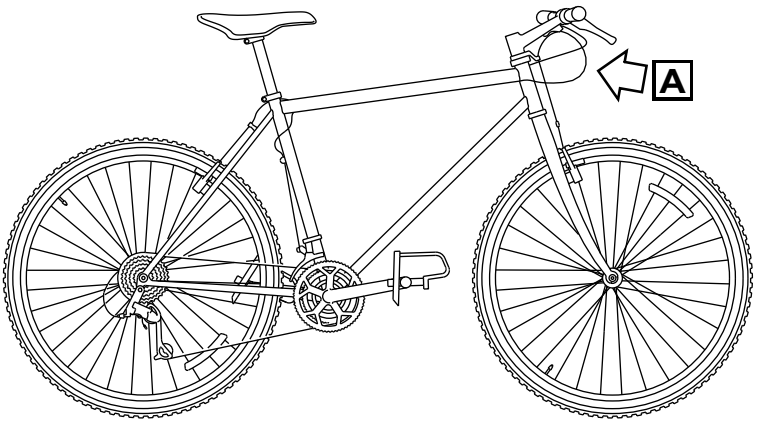
Section 4.1 Description of how it is made

Description

4.1.1 The bicycle frame

The frame is the skeleton, the primary part of your bicycle. Its structure makes the bicycle resistant to large forces.

The initial frames (refer to Fig 1) were tubes of aluminum or steel welded together.



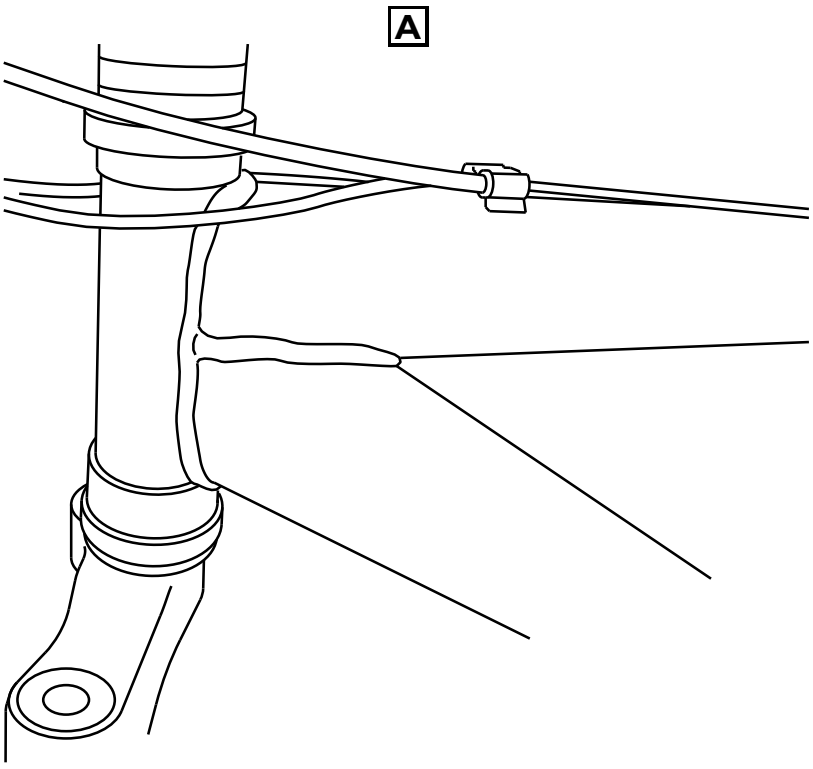


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Figure 1 Welded frame joints

Subsequent frames (refer to Fig 2) can be made out of a wide variety of materials, including aluminium, titanium, or chrome moly.

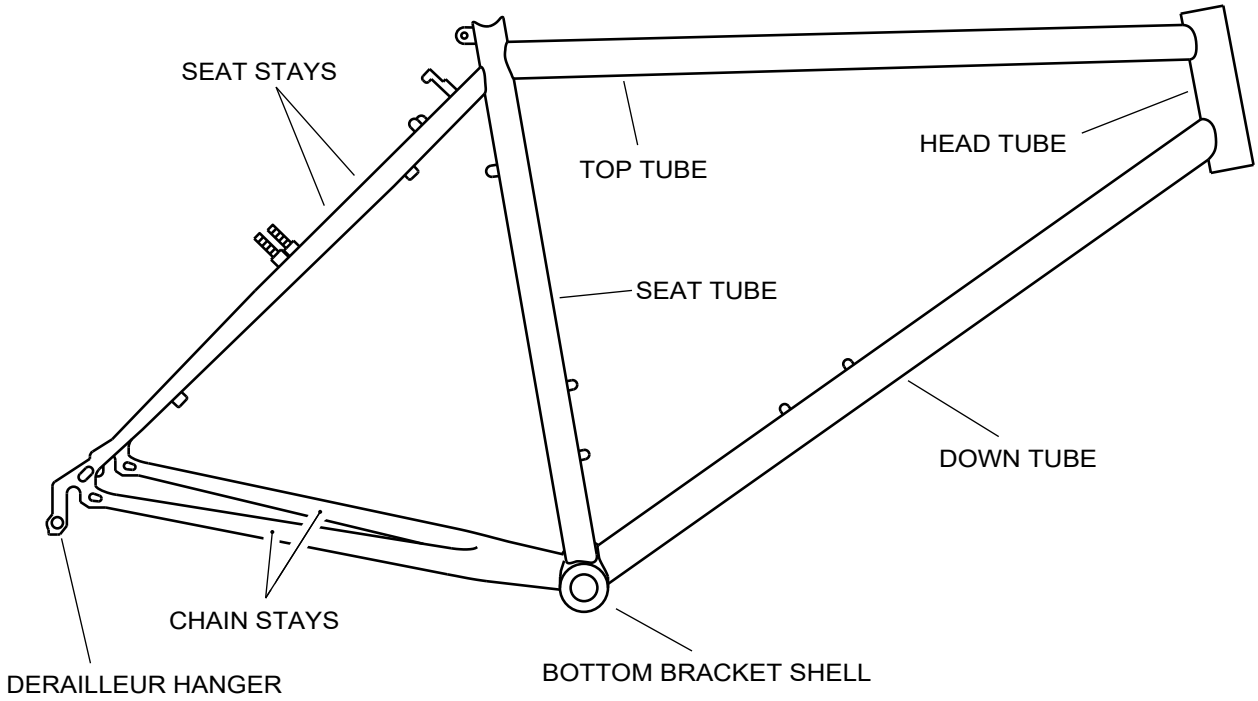

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Figure 2 Frame

Other Frames are different and can also be of different materials (for example, titanium or chrome moly). Some bicycle frames are of carbon fiber. To get this material, it is necessary to put sheets of carbon fiber cloth on foam forms and epoxy them in position. This procedure gives a very light, strong structure that can have different shapes.

The frame includes the parts that follow:

- the top tube (the higher bar of the bicycle frame)
- the down tube (the section of the frame that extends from the stem to the bottom bracket)
- the head tube (the part of the frame that the fork steerer tube goes through)
- the seat tube (the vertical part of the frame that is the rear of the front triangle and that is between the bottom bracket and the top tube)
- the seat stay (the tube that includes the distance between the seat tube and the rear dropouts)
- the chain stay (the tube that is the bottom part of the rear triangle)

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Section 5 - Forks

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Section 5.1 Manual test

Preliminary requirements

Required personnel

Table 1 Required personnel

Person	Category	Skill level	Trade/Trade code	Estimated time
Man A	Basic user		Operator	0,1 h

Procedure

1 Climb on the bicycle.

2 Turn right and left several times.

3 Ride forward the bicycle.

4 Make sure that the wheels are stable.

5 Push in the fork.

6 Make sure that no oil or air is leaking out the fork.

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Section 5.2

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Section 5.2.1 Remove procedures

Preliminary requirements

Required personnel

Table 1 Required personnel

Person	Category	Skill level	Trade/Trade code	Estimated time
As required				

Required technical information

Table 2 Required technical information

Document No.	Title	Category
S1000DBIKE-AAA-DA2-10-00-00AA-520A-A		Data module (DM)
S1000DBIKE-AAA-DA2-30-00-00AA-520A-A		Data module (DM)

Procedure

1 Remove the stem, refer to: Sect 8.2.1 Remove procedures

2 Remove the headset, refer to: Sect 8.4.2.1 Remove procedures

3 Push the fork downwards to remove it from the frame

4 Put the frame on the floor

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Section 5.3

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List of tables

Section 5.3.1 Install procedures

Preliminary requirements

Required personnel

Table 1 Required personnel

Person	Category	Skill level	Trade/Trade code	Estimated time
As required				

Required technical information

Table 2 Required technical information

Document No.	Title	Category
S1000DBIKE-AAA-DA2-10-00-00AA-720A-A		Data module (DM)
S1000DBIKE-AAA-DA2-30-00-00AA-720A-A		Data module (DM)
S1000DBIKE-AAA-DA2-40-00-00AA-720A-A		Data module (DM)

Consumables, materials and expendables

Table 3 Consumables, materials and expendables

Name	Identification/Reference	Quantity	Remark
General grease	Part No. KZ222/LL-005	As required	

Spares

Table 4 Spares

Name	Identification/Reference	Quantity	Remark
Fork set	Part No. KZ666/SPA-1000-1 Set SPA-1000-1-001	1 EA	
- Fork	Part No. KZ666/FK-TEL1001	1 EA	

Procedure

1 Apply grease (General grease) on the headset

2 Install the headset, refer to: Sect 8.4.3.1 Install procedures

3 To install the spacers, refer to: Sect 8.4.3.2 Install procedures

4 Install the stem, refer to: Sect 8.2.2 Install procedures

5 Install the fork (Fork)

Section 5.4

Table of contents

List of tables

Section 5.4.1 Install procedures

Preliminary requirements

Required personnel

Table 1 Required personnel

Person	Category	Skill level	Trade/Trade code	Estimated time
As required				

Required technical information

Table 2 Required technical information

Document No.	Title	Category
S1000DBIKE-AAA-DA2-10-00-00AA-720A-A		Data module (DM)
S1000DBIKE-AAA-DA2-30-00-00AA-720A-A		Data module (DM)

Consumables, materials and expendables

Table 3 Consumables, materials and expendables

Name	Identification/Reference	Quantity	Remark
General grease	Part No. KZ222/LL-005	As required	

Spares

Table 4 Spares

Name	Identification/Reference	Quantity	Remark
Fork	Set FK-TEL1002-001	1 EA	
- Fork	Part No. KZ666/FK-TEL1002	1 EA	

Procedure

1 Apply grease (General grease) on the headset

2 Install the headset, refer to: Sect 8.4.3.1 Install procedures

3 Install the stem, refer to: Sect 8.2.2 Install procedures

4 Install the fork (Fork)

Section 5.5

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List of tables

Section 5.5.1 Replacement procedure

Preliminary requirements

Production management data

Maintenance Action Duration

Preliminary requirements ..... 0 h
Procedure ..... 1,5 h
Requirements after job completion ..... 0 h

Production management data

Maintenance Action Duration

Preliminary requirements ..... 0 h
Procedure ..... 1 h
Requirements after job completion ..... 0 h

Required technical information

Table 1 Required technical information

Document No.	Title	Category
S1000DBIKE-AAA-DA0-30-00-00AA-520A-A		Data module (DM)
S1000DBIKE-AAA-DA1-20-00-00AA-520A-A		Data module (DM)

Table 1 Required technical information (Continued)

Document No.	Title	Category
S1000DBIKE-AAA-D00-00-01-00AA-520A-A		Data module (DM)
S1000DBIKE-AAA-D00-00-01-00AA-93AA-A		Data module (DM)
S1000DBIKE-AAA-D00-00-01-00AA-720A-A		Data module (DM)
S1000DBIKE-AAA-D00-00-01-00AB-720A-A		Data module (DM)
S1000DBIKE-AAA-DA1-20-00-00AA-720A-A		Data module (DM)
S1000DBIKE-AAA-DA0-30-00-00AA-720A-A		Data module (DM)
S1000DBIKE-AAA-D00-00-01-00AA-341A-A		Data module (DM)
BRAKE-AAA-DA1-00-00-00AA-341A-A		Data module (DM)

Support equipment

Table 2 Support equipment

Name	Identification/Reference	Quantity	Remark
Applicability:			
Mountain bicycle and (Mountain storm Mk1 or Brook trekker Mk9)			
	Set BSK-TLST-200-001	1 EA	
- Saw tool set	Part No. /BSK-STS-001	1 EA	

Consumables, materials and expendables

Table 3 Consumables, materials and expendables

Name	Identification/Reference	Quantity	Remark
Applicability:			
Mountain bicycle and (Mountain storm Mk1 or Brook trekker Mk9)			
General grease	Part No. KZ222/LL-005	As required	

Spares

Table 4 Spares

Name	Identification/Reference	Quantity	Remark
Applicability:			
Mountain bicycle and Mountain storm Mk1			
Fork set	Set SPA-1000-1-001	1 EA	
- Fork set	Part No. KZ666/-	1 EA	
Applicability:			
Mountain bicycle and Brook trekker Mk9			
Fork	Set FK-TEL1002-001	1 EA	
- Fork	Part No. KZ666/FK-TEL1002	1 EA	

Procedure

1 PREPARATION

1.1 Remove the front wheel, refer to: Sect 6.3.1 Remove procedures

1.2 Remove the front brakes, refer to: Sect 7.4.1 Remove procedures

2 PROCEDURE

2.1 Remove the fork, refer to: Sect 5.2.1 Remove procedures

2.2 Change the bike axis, refer to: Sect 5.6.1 Modification procedures

2.3 [ALT] Install the new fork, refer to: Sect 5.3.1 Install procedures

2.3 [ALT] Install the new fork, refer to: Sect 5.4.1 Install procedures

2.4 Install the front brakes, refer to: Sect 7.5.1 Install procedures

2.5 Install the front wheel, refer to: Sect 6.4.1 Install procedures

3 TEST

3.1 Test that the fork is properly installed, refer to: Sect 5.1 Manual test

3.2 Front brakes test, refer to: ### Error unable to find target for reference to DMC-BRAKE-AAA-DA1-00-00-00AA-341A-A ###

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Section 5.6

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Section 5.6.1 Modification procedures

Preliminary requirements

Support equipment

Table 1 Support equipment

Name	Identification/Reference	Quantity	Remark
Saw tool set	Set BSK-TLST-200-001	1 EA	
- Saw tool	Part No. KZ666/BSK-TW-100	1 EA	
- Threading tool	Part No. KZ666/BSK-THR-3001	1 EA	

Spares

Table 2 Spares

Name	Identification/Reference	Quantity	Remark
Wheel axis	Part No. KZ666/BSK-AXS-2001	1 EA	
- Wheel axis	Part No. KZ666/BSK-AXS-2000	1 EA	

Procedure

1 Use the (Saw tool) to saw the (Wheel axis)

Use the (Threading tool) when the saw is unbended

2 Put the frame on the floor

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Section 6 - Wheels

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Section 6.1 Description of how it is made

Description

6.1.1 The bicycle wheel

The wheel (refer to Fig 1) of a bicycle is a complex structure. The wheel assembly has these parts:

the tire

the tube

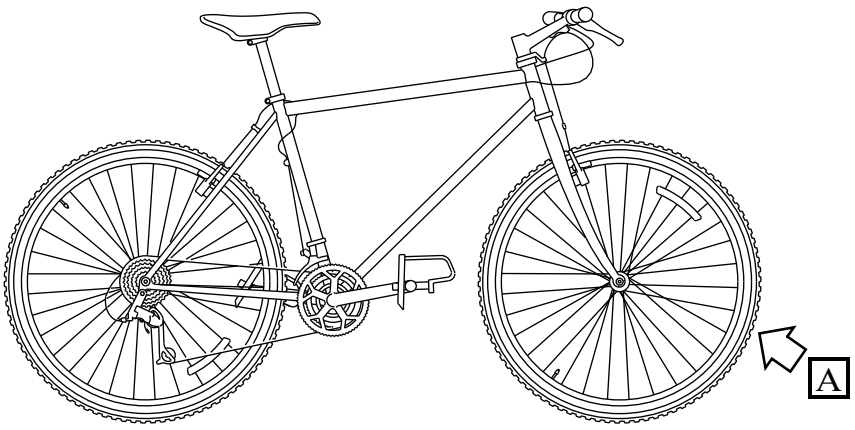
the spokes

the spoke nipples

the valve

the hub

On their own, the individual components are not very strong. But, when they are installed together, the components make the complete wheel (refer to Fig 1). The complete wheel is resistant to almost any type of heavy loads and operation.



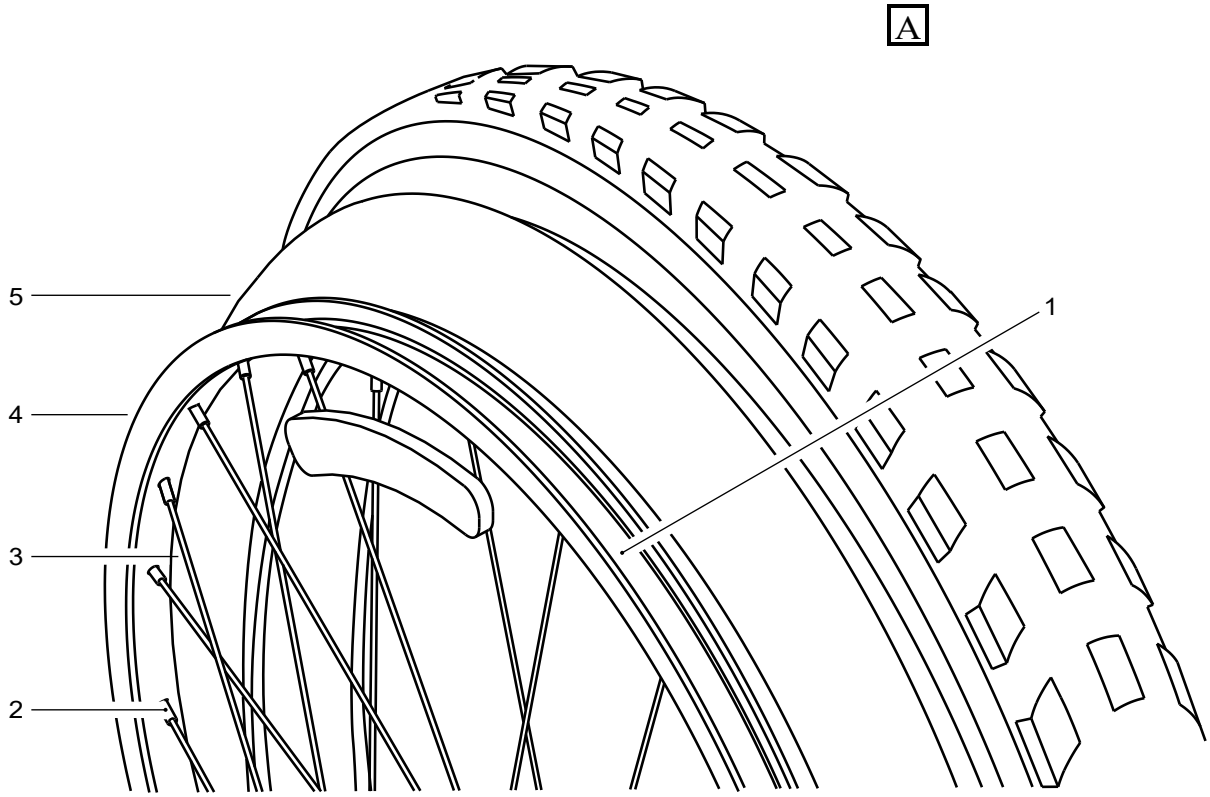


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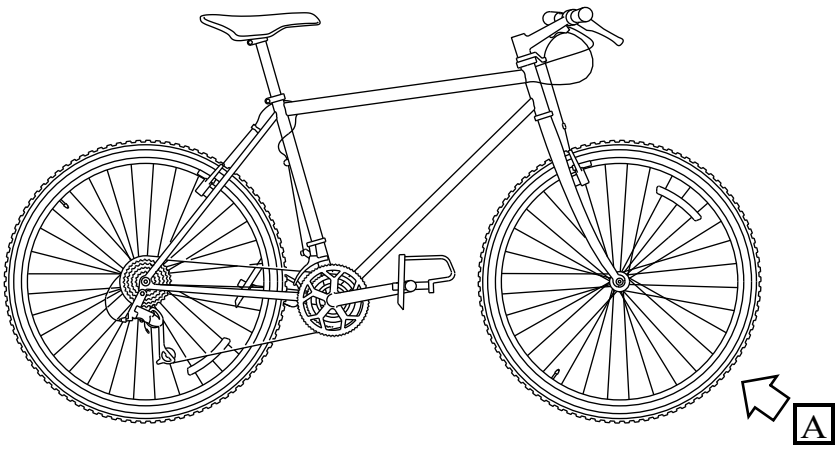
Figure 1 Parts of the wheel

The spokes go out from the hub and go across and below each other. The spoke nipples attach the spokes to the rim with the threads on the end of the spokes. You can use the spoke nipples to adjust the tension of the spokes. The tension on each of the spokes must be equal.

6.1.1.2 Wheel rim

The rim (refer to Fig 2) of the wheel has a lining of rim tape. This tape protects the tube from damage that the rough edges on the spoke nipples can cause.



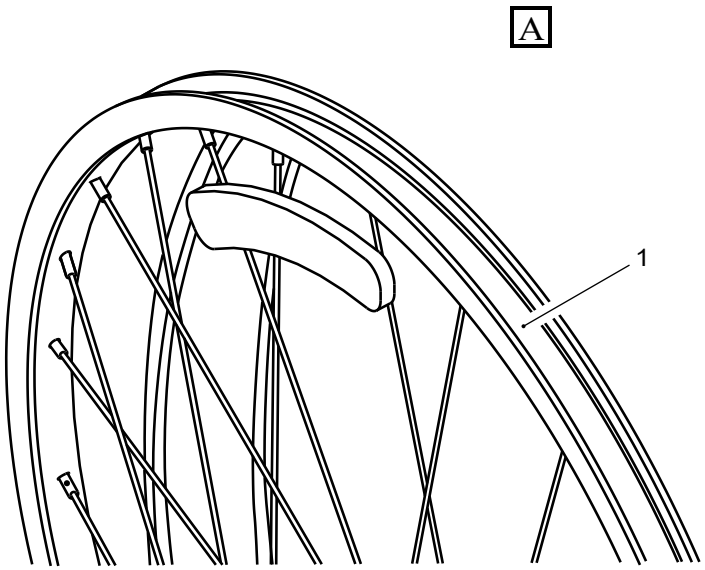


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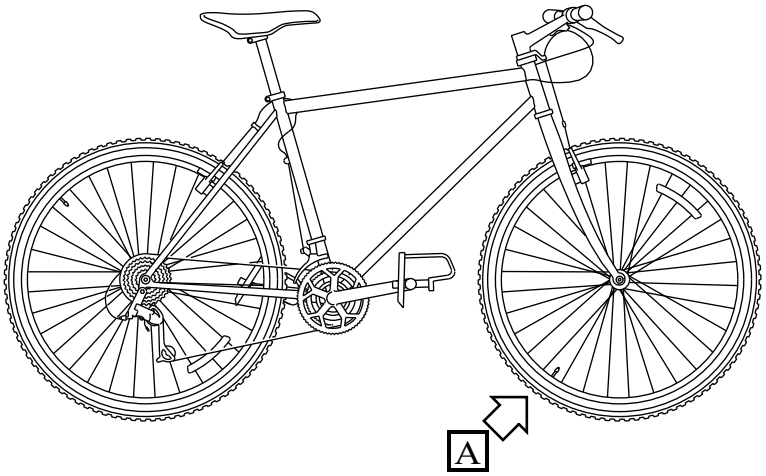
Figure 2 The tire and rim

6.1.1.3 Tube and tire

The tube and the tire install on the rim. The sidewalls of the tire have markings on them. These which are used to indicate the correct direction of rotation. The markings also make sure the tire installs on the rim and that the directional arrows points in the correct direction. You install the tube into the tire before you inflate it. The tube has a valve (refer to Fig 3) which you put through the hole in the rim. This valve (refer to Fig 3) is used to inflate the tube and the tire to the correct pressure. A dust cap installs on the valve (refer to Fig 3) to prevent damage that dust and debris can cause.



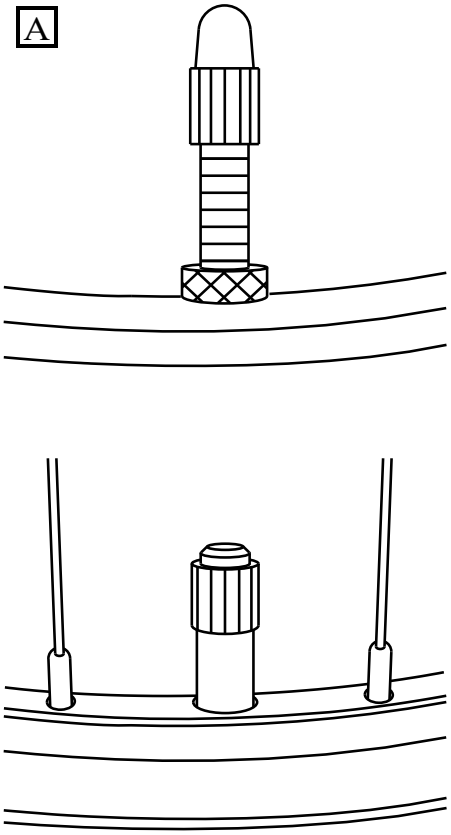


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Figure 3 Valve

Section 6.2

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Section 6.2.1 Remove procedures

Preliminary requirements

Required personnel

Table 1 Required personnel

Person	Category	Skill level	Trade/Trade code	Estimated time
As required				

Procedure

1 Hold the rear of the bicycle.

2 Push the wheel forwards and down to disengage the chain from the sprocket.

3 Turn the wheel to the side and lift it away from the frame.

4 Put the frame on the floor.

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Section 6.3

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List of tables

Section 6.3.1 Remove procedures

Preliminary requirements

Required personnel

Table 1 Required personnel

Person	Category	Skill level	Trade/Trade code	Estimated time
As required				

Support equipment

Table 2 Support equipment

Name	Identification/Reference	Quantity	Remark
Specialist toolset	Part No. KZ666/BSK-TLST-001	1 EA	

Procedure

1 Hold the front of the bicycle.

2 Use the (Specialist toolset) to disengage the fork from the chainring by pushing the wheel forwards and down.

3 Lift the wheel away from the frame.

4 Put the frame on the floor.

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Section 6.4

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Section 6.4.1 Install procedures

Preliminary requirements

Required personnel

Table 1 Required personnel

Person	Category	Skill level	Trade/Trade code	Estimated time
As required				

Support equipment

Table 2 Support equipment

Name	Identification/Reference	Quantity	Remark
Specialist toolset	Part No. KZ666/BSK-TLST-001	1 EA	

Procedure

1 **Note**

It is necessary to install the fork and the brakes before installing the wheel

2 Hold the front of the bicycle.

3 Install the wheel with (Specialist toolset) and be careful to not damage the chainring.

4 Put the bike on the floor.

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Section 7 - Brakes

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Section 7.1 Description of how it is made

Description

7.1.1 Brake system

The most important part of the bicycle is the brake system. Only a minimum maintenance of the brake system is necessary. But, when a problem does occur, make sure you to do the necessary maintenance as quickly as possible. If you do not do this the bicycle will be dangerous to use.

There are nine different types of brake systems. The one found on most bicycles is the cantilever brake (refer to Para 7.1.1.1).

7.1.1.1 Cantilever brake

The brake system (refer to Fig 1) has these primary components:

the brake lever (refer to Para 7.1.1.3)

the brake cable

the brake arm

the brake clamp (also known as callipers)

the brake pads (refer to Para 7.1.1.2)

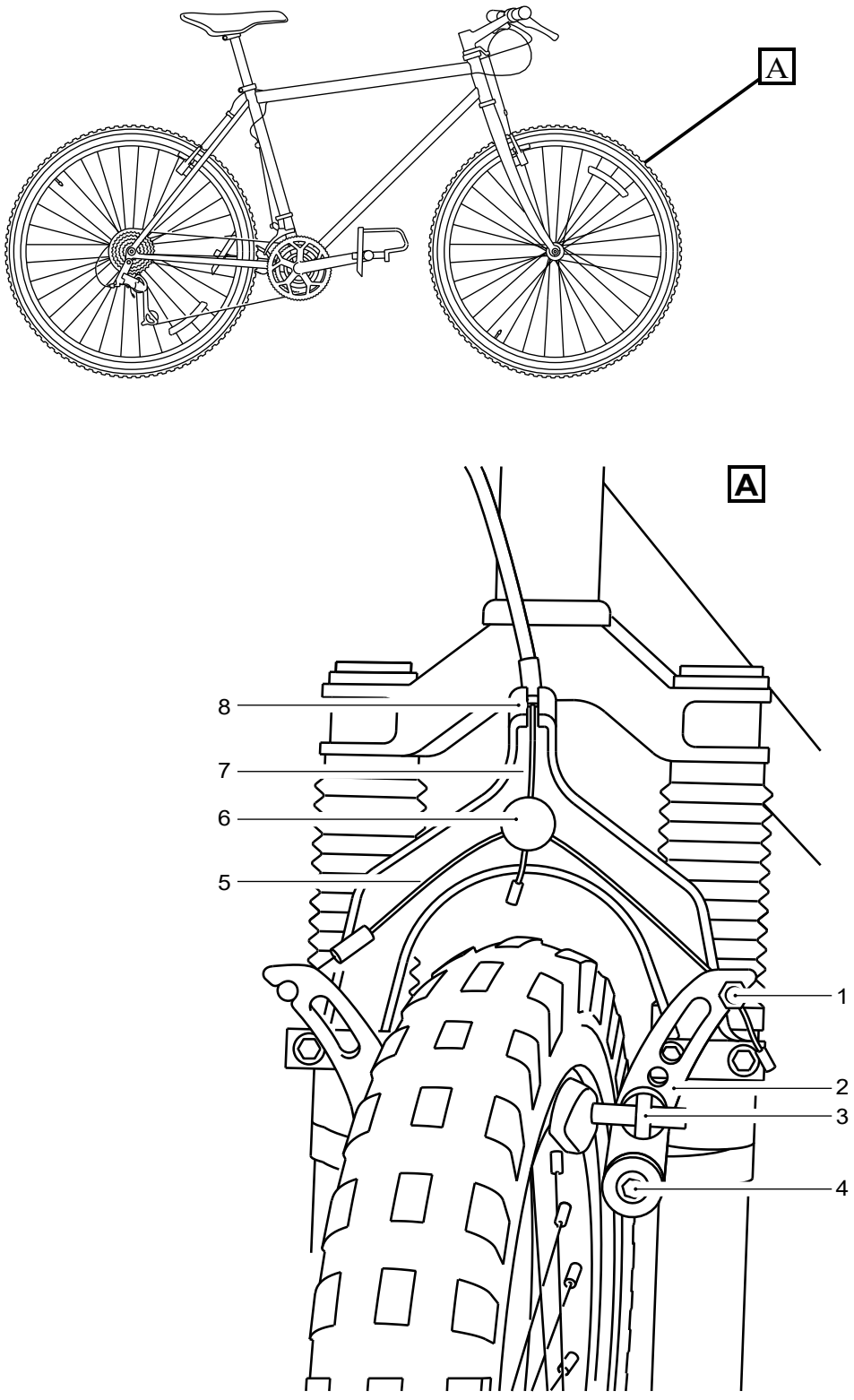

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Figure 1 Cantilever brake with straddle cable

A cable that goes from the brake levers on the handlebars pulls the two levers on the brakes together. This presses the brake pads against the outer rim of the wheel, which decreases the speed of the bicycle.

7.1.1.2 Brake pads

There are four brake pads (refer to Fig 2) on the bicycle. Two are found on the front wheel and two on the rear wheel. The brake pads are made out of hard wearing rubber. The pads press against the rim of the wheel to cause friction when the you operate the brake levers.

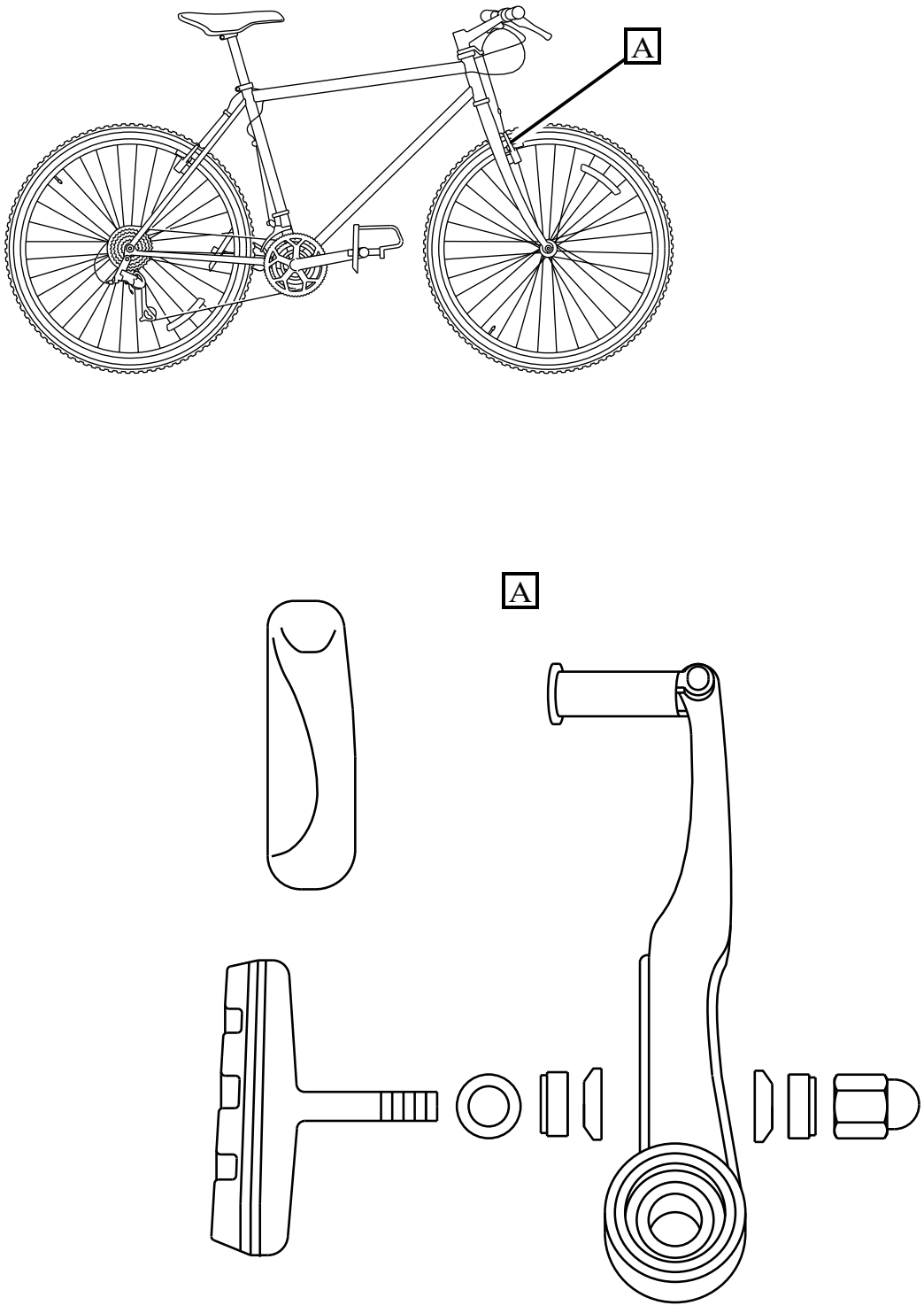

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Figure 2 Exploded diagram of a brake

7.1.1.3 Brake lever

The brake levers (refer to Fig 3) are easily damaged. The lever is installed in the mount. A clamp bolt holds the mount. This bolt is not visible because it is found in the mount. The lever turns on a lever pivot bolt. The adjuster lock nut holds the brake cable. This lock nut adjusts the tension of the cable.

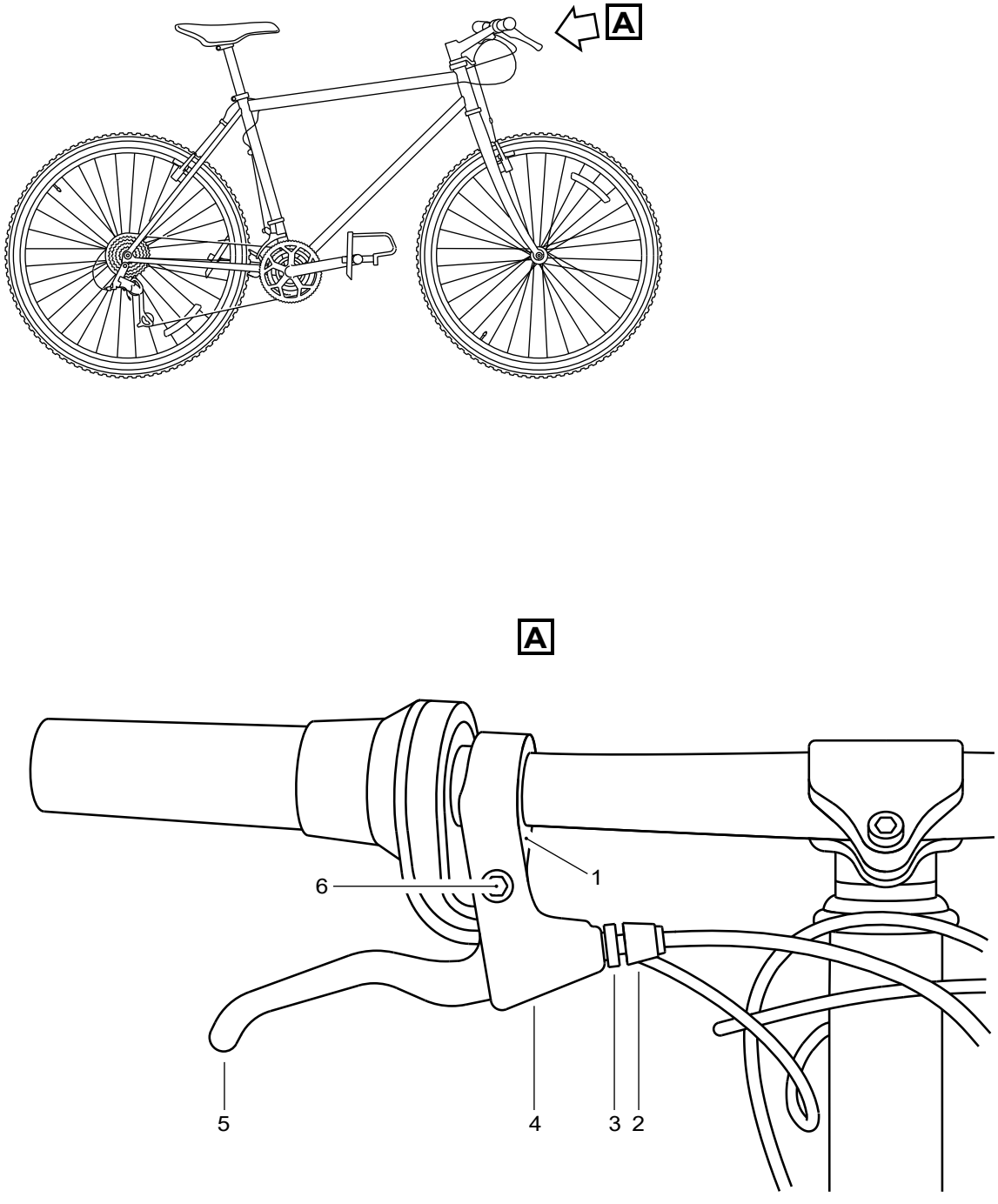

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Figure 3 Typical components of a mountain bicycle lever

The left brake lever holds the brake pads on the front wheel and the right brake pads hold the brakes on the rear wheel.

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Section 7.2

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Section 7.2.1 Manual test

Preliminary requirements

Required personnel

Table 1 Required personnel

Person	Category	Skill level	Trade/Trade code	Estimated time
Man A	Basic user		Operator	0,3 h

Procedure

1 Put the bicycle in a vertical position.

2 Hold the handle bars and push the bicycle forwards.

3 Apply the brakes.

4 Make sure that the wheels lock and the bicycle stops.

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Section 7.3

Table of contents

List of tables

Section 7.3.1 Clean with rubbing alcohol

Preliminary requirements

Required personnel

Table 1 Required personnel

Person	Category	Skill level	Trade/Trade code	Estimated time
Man A	Basic user		Operator	0,3 h

Consumables, materials and expendables

Table 2 Consumables, materials and expendables

Name	Identification/Reference	Quantity	Remark
Rubbing alcohol	Part No. KZ222/LL-002	As required	

Procedure

1 Do a visual inspection of the brakes as given in the pre-ride checks (refer to Sect 2.2.1 Pre-operation procedures (crew)).

2 Clean the brake pads.

2.1 Find each of the brake pads.

2.2 Apply a thin layer of the Rubbing alcohol on each of the brake pads.

2.3 Rub the surface until you have applied the Rubbing alcohol to the complete surface of the pad.

2.4 Remove the unwanted alcohol.

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Section 7.4

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Section 7.4.1 Remove procedures

Preliminary requirements

Required personnel

Table 1 Required personnel

Person	Category	Skill level	Trade/Trade code	Estimated time
As required				

Procedure

1 Hold the front of the bicycle.

2 Remove the front brake forwards.

3 Put the frame on the floor.

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Section 7.5

Table of contents

Section 7.5.1 Install procedures

Preliminary requirements

Required personnel

Table 1 Required personnel

Person	Category	Skill level	Trade/Trade code	Estimated time
As required				

Procedure

1 **Note**

It is necessary to install the fork before installing the brakes

2 Hold the front of the bicycle.

3 Install the front brakes on the fork.

4 Put the frame on the floor.

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Section 8 - Steering

Table of contents

Section 8.1 Description of how it is made

Description

8.1.1 Steering

The steering on the bike is what enables the bike to manoeuvre in a given direction during travel. The steering system on the bike is made of three parts, they are:

Para 8.1.1.1 The handlebar

Para 8.1.1.2 The headset

Para 8.1.1.3 The stem

8.1.1.1 Handlebar

This consists of a horizontal bar attached to the stem with handgrips at the end. Brake levers and shifters are also attached to this bar although they do not have any part in the steering mechanism. The handlebars manoeuvrability is a sideways swivelling action. The handlebars themselves do not provide this swivelling, the headset (also known as the steering tube) is the mechanism that enables the handlebars to swivel.

8.1.1.2 Headset

This mechanism is situated in front of the frame and connects the front fork to the stem and handlebars. The headset allows the handlebars to swivel left and right for steering purposes.

For a full description of the headset, refer to Sect 8.4.1 Description of how it is made .

8.1.1.3 Stem

The stem is a piece that attaches the handlebar to the steering tube. Basically the stem is just a threaded stem bolt situated inside the steerer tube and is what attaches the handlebars to the headset.

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Section 8.2 - Stem

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Section 8.2.1 Remove procedures

Preliminary requirements

Required conditions

Table 1 Required conditions

Action/Condition	Data Module/Technical Publication
Safety the bicycle in a bicycle stand and hold the front wheel off the ground	

Required personnel

Table 2 Required personnel

Person	Category	Skill level	Trade/Trade code	Estimated time
Man A	Bike Rider	Intermediate	Operator	1,5 h

Support equipment

Table 3 Support equipment

Name	Identification/Reference	Quantity	Remark
Set of Allen wrenches	Part No. KZ666/BSK-TLST-001-13	1 EA	
Work stand	Part No. KZ555/Stand-001	1 EA	

Safety conditions

Note

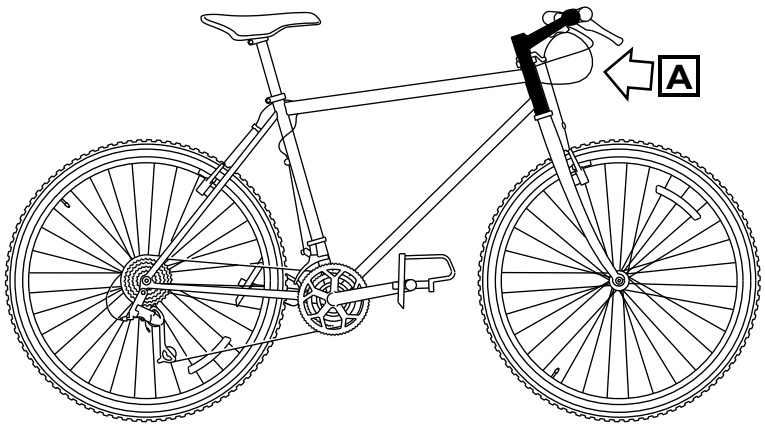
It is not necessary to remove the handlebar when you remove the stem to get access to the headset.

Procedure

1 Remove the handlebar Sect 8.3.1 Remove procedures

2 Remove the stem.

2.1 Remove the bolt in the center of the stem cap.



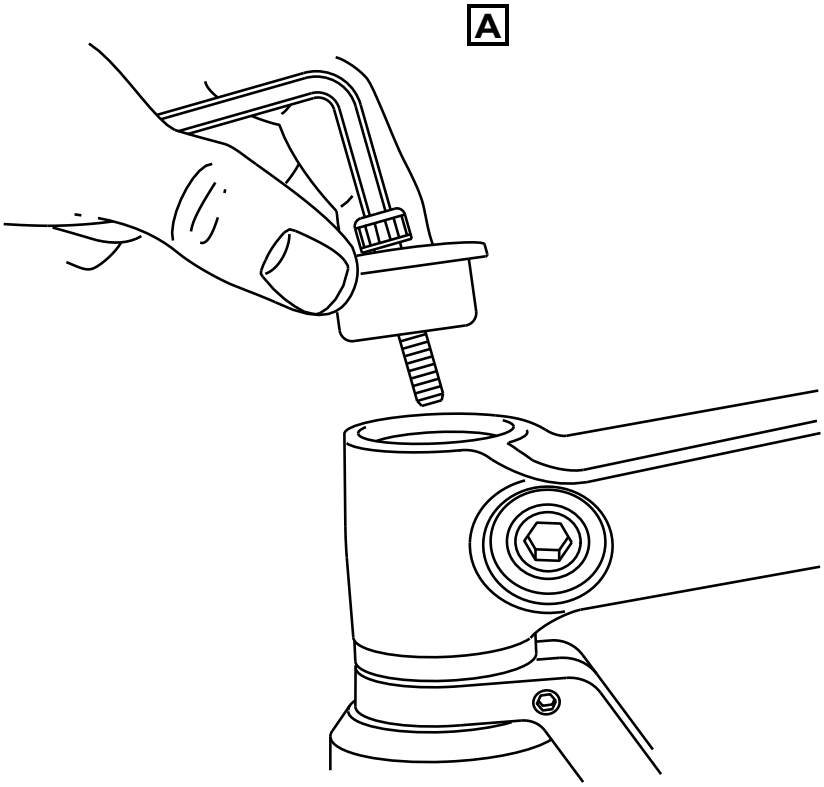


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Figure 1 Remove the bolt

2.2 Loosen the stem clam bolt with a Set of Allen wrenches.

2.3 Remove the stem from the steerer tube.

2.4 Note: It is not necessary to remove the handlebar if you remove the stem to get access to the headset.

Section 8.2.2 Install procedures

Preliminary requirements

Required conditions

Table 4 Required conditions

Action/Condition	Data Module/Technical Publication
Make sure the bicycle is held safely on a work stand with the front wheel free of the ground	

Required personnel

Table 5 Required personnel

Person	Category	Skill level	Trade/Trade code	Estimated time
Man A	Bike Rider	Intermediate	Operator	1,0 h

Support equipment

Table 6 Support equipment

Name	Identification/Reference	Quantity	Remark
Clean dry cloth	Part No. KZ666/BSK-TLST-001-12	1 EA	
Work stand	Part No. KZ555/Stand-001	1 EA	

Consumables, materials and expendables

Table 7 Consumables, materials and expendables

Name	Identification/Reference	Quantity	Remark
Rubbing alcohol	Part No. KZ222/LL-002	1 L	
General lubricant	Part No. KZ222/LL-001	1 L	

Spares

Table 8 Spares

Name	Identification/Reference	Quantity	Remark
Stem	Part No. KZ555/St-001	1 EA	
Stem bolt	Part No. KZ555/St-001-01	1 EA	

Safety conditions

CAUTIONS

- **Do not tighten the stem bolt too much. You can cause damage to the headset bearings if you tighten the stem too much.**
- **The stem bolt does not safety the stem.**

Note

The stem must point forward in alignment with the wheel.

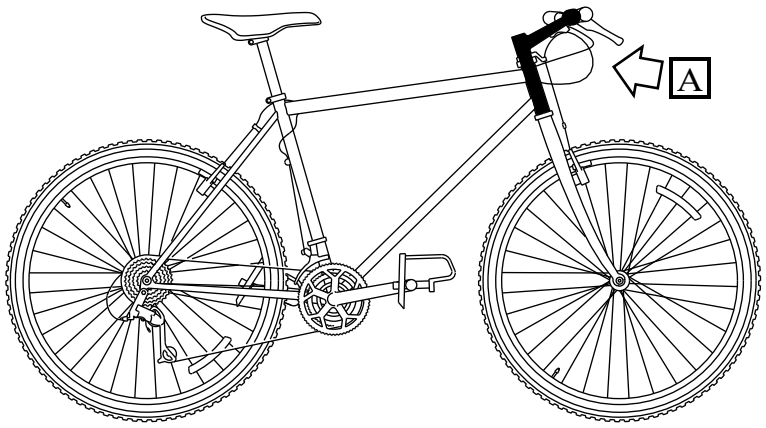
Procedure

1 Remove all the rust and the corrosion with a Clean dry cloth and Rubbing alcohol.

2 Install the stem.

2.1 Use a General lubricant and lubricate:

- the threads of the Stem and Stem bolt
- the sides
- the top of the wedge



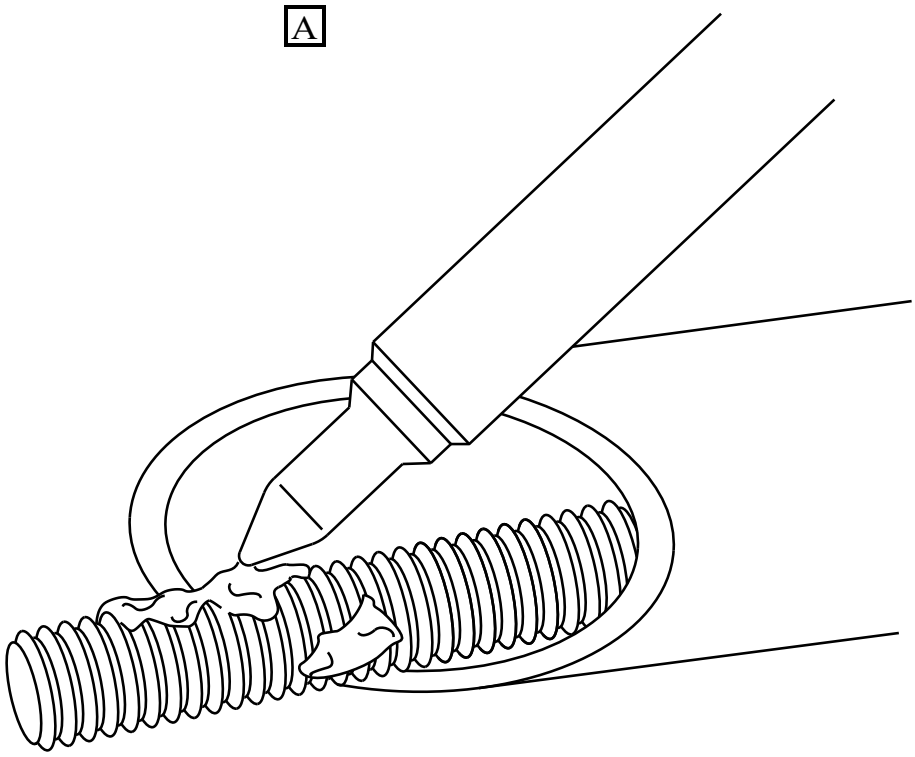


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Figure 2 Lubricate the thread

2.2 Install the Stem in the steerer tube.

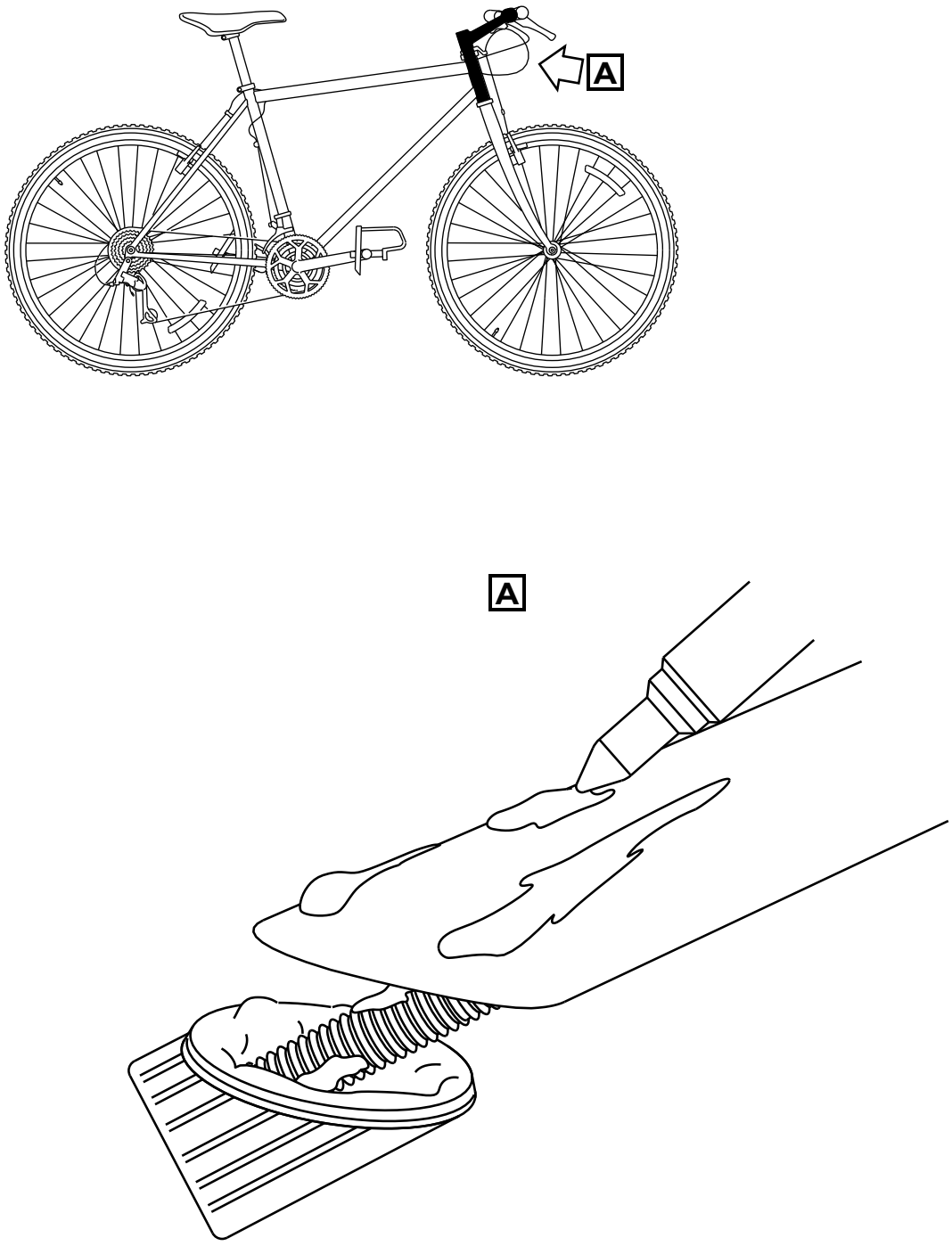

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Figure 3 Tighten the bolt

2.3 Adjust to align the Stem with the wheel and tighten the Stem bolt firmly.

3 Install the handlebars (refer to Sect 8.3.2 Install procedures).

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Section 8.3 - Handlebar

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Section 8.3.1 Remove procedures

Preliminary requirements

Required conditions

Table 1 Required conditions

Action/Condition	Data Module/Technical Publication
The bicycle is held safely on a work stand.	

Required personnel

Table 2 Required personnel

Person	Category	Skill level	Trade/Trade code	Estimated time
Man A	Bike rider	Intermediate	Operator	1,5 h

Support equipment

Table 3 Support equipment

Name	Identification/Reference	Quantity	Remark
Set of Allen wrenches	Part No. KZ666/BSK-TLST-001-13	1 EA	
Work stand	Part No. KZ555/Stand-001	1 EA	

Safety conditions

WARNING

Do not ride a bicycle with no grips on the handlebar. This can cause the hands of the rider to slip.

Procedure

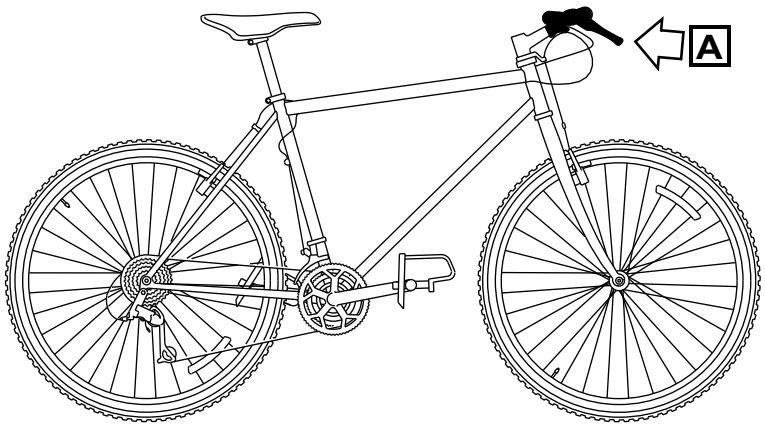
1 Remove the grips

1.1 Put a long thin screwdriver below the grip and apply water between the grip and the handle bar.

1.2 Turn the grip forwards and rearwards to loosen it and then pull it off the end of the handlebar.

2 Remove the brake and the shift levers from the handlebars

2.1 Loosen the clamp screw (refer to Fig 1) which is behind or below the brake lever (as shown).



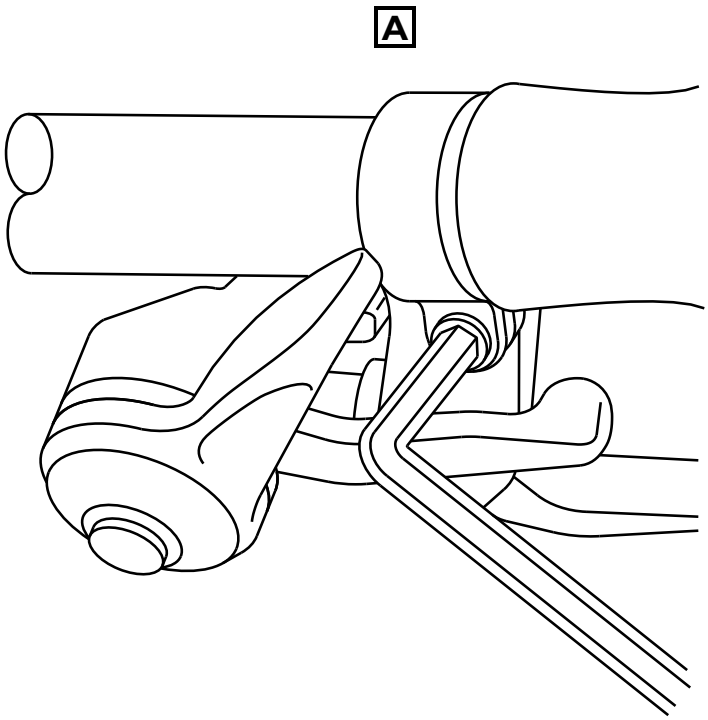


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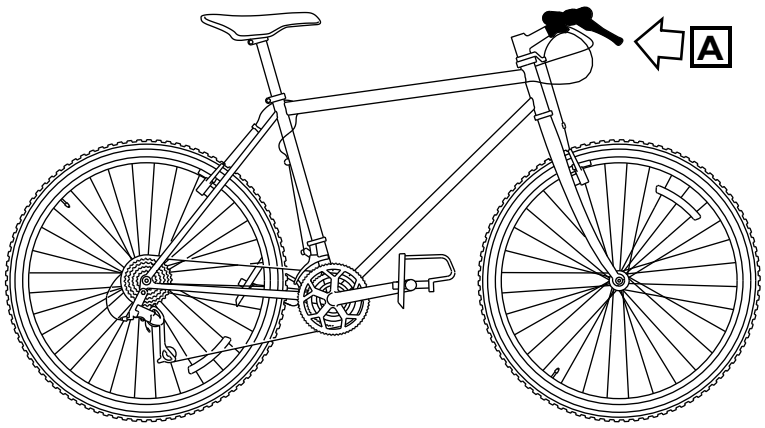
Figure 1 Loosen the clamp screw with the Allen wrench

2.2 Remove the lever and the mount from the handlebar.

2.3 Loosen the clamp bolt and remove the shifter from the handlebar.

3 Remove the handlebar

Use a Set of Allen wrenches and loosen the clamp bolt (refer to Fig 2). To remove, move the handlebar out of the stem.



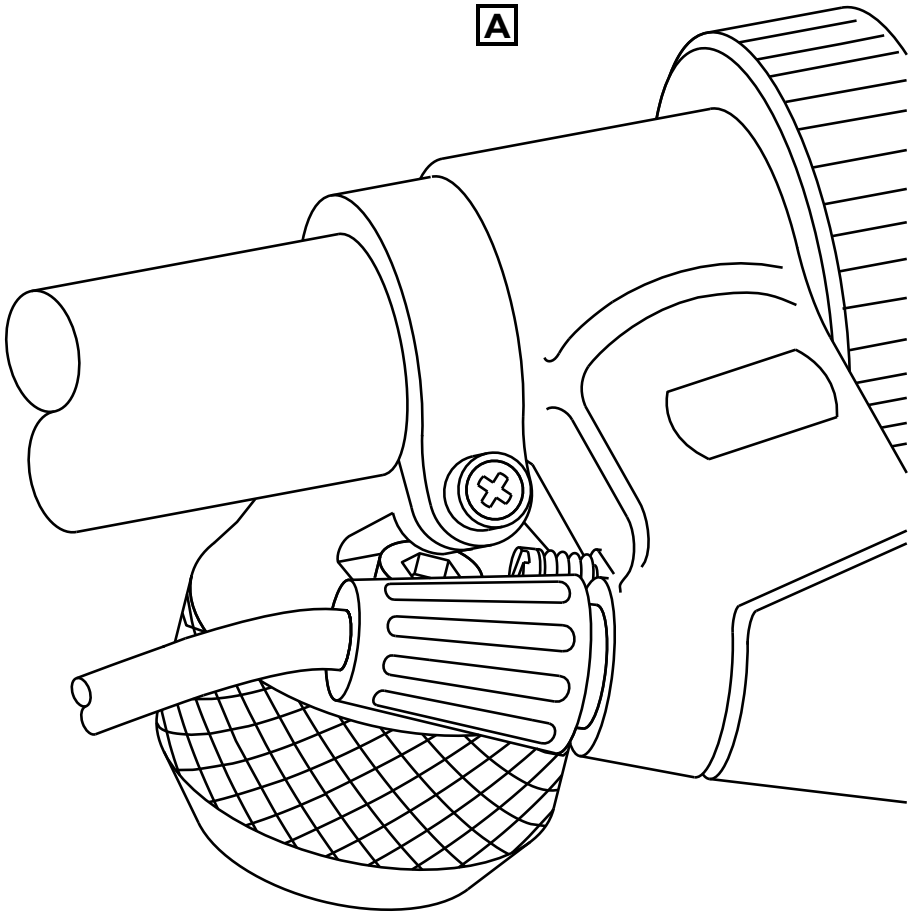


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Figure 2 Loosen the clamp bolt

Section 8.3.2 Install procedures

Preliminary requirements

Required conditions

Table 4 Required conditions

Action/Condition	Data Module/Technical Publication
The bicycle is held safely on work stand. Refer to (Work stand)	

Required personnel

Table 5 Required personnel

Person	Category	Skill level	Trade/Trade code	Estimated time
Man A	Bike rider	Intermediate	Operator	1,5 h

Support equipment

Table 6 Support equipment

Name	Identification/Reference	Quantity	Remark
Set of Allen wrenches	Part No. KZ666/BSK-TLST-001-13	1 EA	
Extra firm hold hairspray	Part No. HS111/HSP-D001	1 EA	
Work stand	Part No. KZ555/Stand-001	1 EA	

Spares

Table 7 Spares

Name	Identification/Reference	Quantity	Remark
Handlebar	Part No. KZ555/Hd-001	1 EA	
Brake lever	Part No. KT444/BR-LVRS-001	1 EA	
Shifter lever	Part No. KZ555/Sl-001	1 EA	
Brake lever mount	Part No. KT444/BR-LVRS-001-01	1 EA	
Handlebar grips	Part No. KZ555/Hd-001-01	1 EA	
Handlebar plug	Part No. KZ555/Hd-001-02	1 EA	

Safety conditions

WARNINGS

- **Do not ride the bicycle until the grips have become dry and are firmly held in position. If the grips are wet, your hands can move off the grips when you ride the bicycle.**
- **Do not ride a bicycle with no grips on the handlebar.**

CAUTION

Make sure the handlebar is correctly aligned in the center of the stem.

Procedure

1 Put the Handlebar in the stem and tighten the clamp bolt with a Set of Allen wrenches. Make sure the handlebar is correctly aligned in the center of the stem. Tighten the clamp bolt.

2 Put the Brake lever and Shifter lever on the handlebar.

2.1 Move the Shifter lever on the Handlebar again and make sure you do not catch the cables.

2.2 Tighten the clamp bolt.

2.3 Move the Brake lever mount and the brake lever on the Handlebar again.

2.4 Tighten the clamp screw.

3 Replace the Handlebar grips.

3.1 Apply with the Extra firm hold hairspray to the Handlebar grips area of the Brake lever mount.

3.2 Before the Extra firm hold hairspray becomes dry, move the Handlebar grips into the correct position. Make sure the grip protects the end of the Handlebar or install a Handlebar plug.

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Section 8.4 - Headset

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Section 8.4.1 Description of how it is made

Description

8.4.1.1 Headset

The headset (refer to Fig 1) is a pair of bearings on the two ends of the head tube of the frame. These bearings permit the fork to turn rearward and forward (for example, to let the rider turn the handlebars for the steering).

The headset (refer to Fig 1) includes the parts that follow:

The bearing races that push into the head tube

a bearing race that pushes on the fork steerer tube

an adjustable upper race

two sets of ball bearings

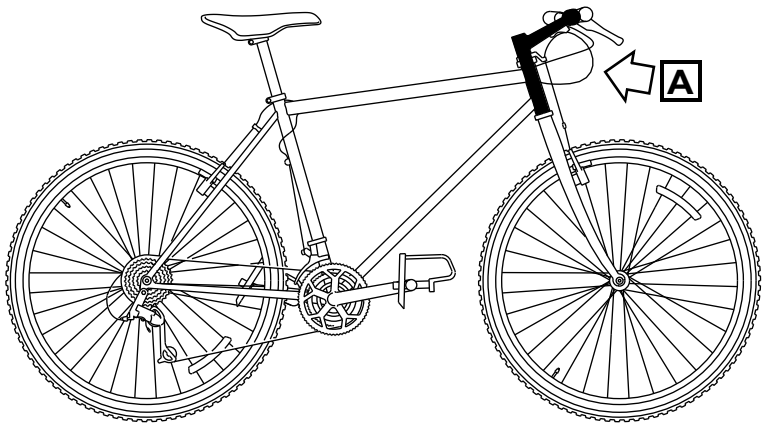
A headset has cups that are pushed into the head tube and a ring on the fork. All three must be fully parallel. It is usually necessary to remove rough paint to get all three fully parallel.

The upper race installs onto the steerer tube with a thread. A locknut is used to safety the upper race.

A clamp bolt holds the stem to the steerer tube.

The fourth remaining bearing race is part of a nut that installs on the threaded top end of the fork. This is done after you install it in the head tube. It is sometimes necessary for some headsets to have more thread at the top of the head tube. If the fork is too long, the spacer rings can be installed. If it is too short, there is a limit to the number of headsets you can use.

For an illustration of the parts of the headset (refer to Fig 1).



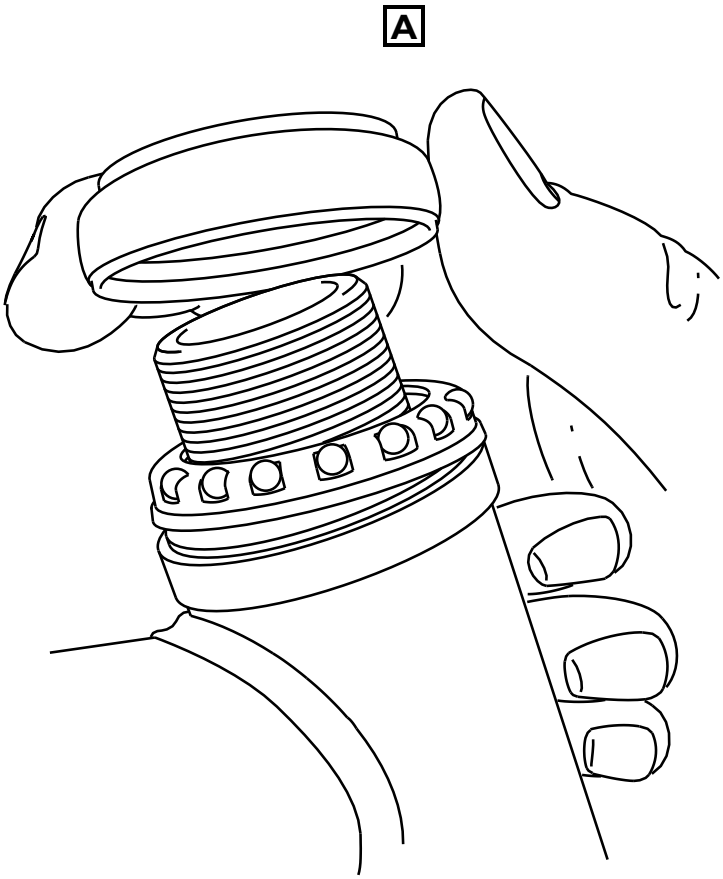


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Figure 1 Headset

Section 8.4.2

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Section 8.4.2.1 Remove procedures

Preliminary requirements

Required conditions

Table 1 Required conditions

Action/Condition	Data Module/Technical Publication
The bicycle is safely held on a work stand	

Required personnel

Table 2 Required personnel

Person	Category	Skill level	Trade/Trade code	Estimated time
Man A	Bike Rider	Intermediate	Operator	0,5 h

Support equipment

Table 3 Support equipment

Name	Identification/Reference	Quantity	Remark
Work stand	Part No. Bikey/Stand-001	1 EA	

Safety conditions

Note

It is not necessary to remove the handlebar for this procedure.

Procedure

1 Remove the stem (refer to Sect 8.2.1 Remove procedures).

2 Remove:

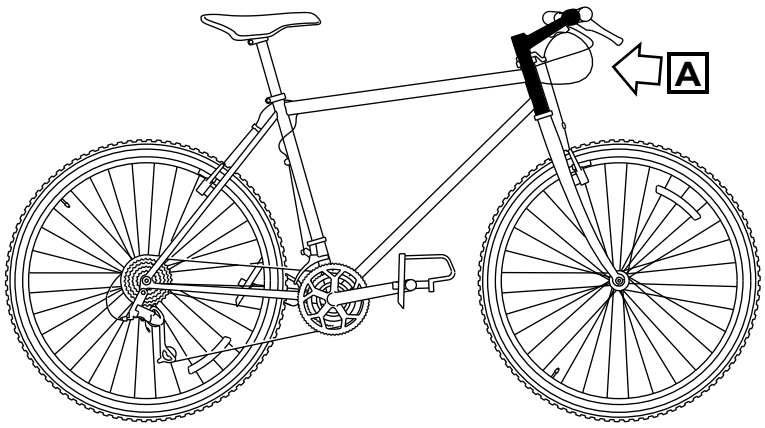
the spacers

the brake cable hangar

the dust seals

the conical expansion washer(s) from the steerer tube

3 Lift the upper bearing cup off (refer to Fig 1) and then remove the fork from the frame.



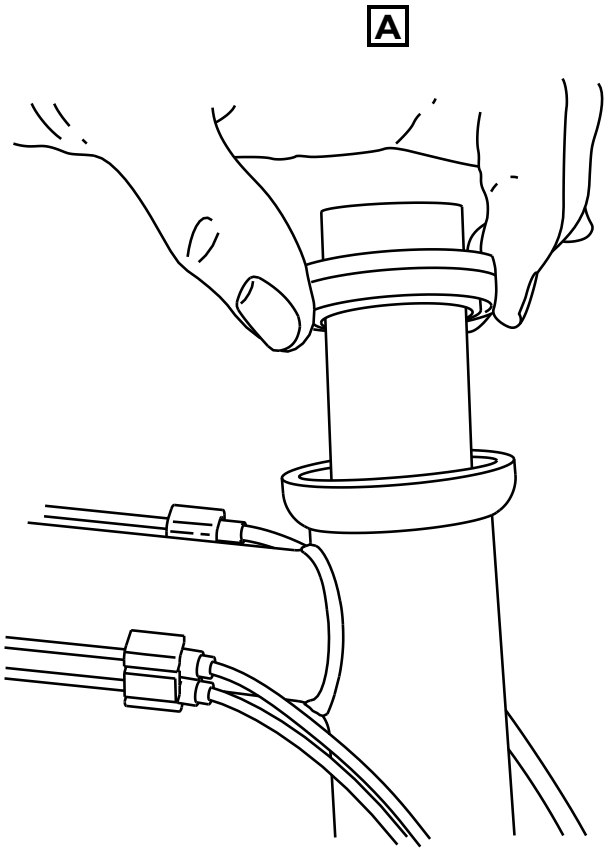


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Figure 1 Lift the upper bearing cup

Applicable to: Mountain bicycle and (Mountain storm Mk1 or Brook trekker Mk9)

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Section 8.4.3

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List of tables

Section 8.4.3.1 Install procedures

Preliminary requirements

Required conditions

Table 1 Required conditions

Action/Condition	Data Module/Technical Publication
The bicycle is safely held on a work stand	

Required personnel

Table 2 Required personnel

Person	Category	Skill level	Trade/Trade code	Estimated time
Man A	Bike Rider	Intermediate	Operator	1,5 h

Support equipment

Table 3 Support equipment

Name	Identification/Reference	Quantity	Remark
Work stand	Part No. Stand/Stand-001	1 EA	

Spares

Table 4 Spares

Name	Identification/Reference	Quantity	Remark
Frame fork	Part No. KZ555/St-001-02	1 EA	
Upper bearing cup	Part No. KZ555/St-001-03	1 EA	
Brake cable hangar	Part No. KT444/BR-LVRS-002	1 EA	
Dust seal	Part No. KZ555/St-001-04	1 EA	
Conical expansion washer	Part No. KZ555/St-001-05	1 EA	

Procedure

1 Install the Frame fork on the frame.

2 Install the Upper bearing cup.

3 Install the components that follow on the steering tube:

the Brake cable hangar

the Dust seal

the Conical expansion washer

4 Install the stem (refer to Sect 8.2.2 Install procedures).

Section 8.4.3.2 Install procedures

Preliminary requirements

Required personnel

Table 5 Required personnel

Person	Category	Skill level	Trade/Trade code	Estimated time
As required				

Spares

Table 6 Spares

Name	Identification/Reference	Quantity	Remark
Fork set	Part No. KZ666/SPA-1000-1 Set SPA-1000-1-001	1 EA	
- Spacer	Part No. KZ666/SPC-200-12	1 EA	

Procedure

1 **Note**

It is necessary to install the headset before installing any spacer

2 Install the spacer (Spacer)

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Section 9 - Gears

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Section 9.1 Description of how it is made

Description

9.1.1 Gears

The gears include the mechanism, the hubs and the shifters.

The description of the mechanisms is given in - Description of how it is made

The description of the shifters is given in - Description of how it is made

The bicycles of these days can have 27 gears or more. The mountain bikes use a set that includes:

- Three socket sprockets of different dimension on the front
- Nine socket sprockets of different dimensions at the rear

This set gives the gear ratios.

The shifters installed on the handlebars change the gears and operate the mechanisms (also known as derailleurs). These derailleurs are cable-actuated mechanisms. They move the chain from the different sprockets.

The hub is the center of the wheel and contains the axle and bearings.

The gears let the rider crank at the pedals at a constant movement on slopes of different angles.

Section 9.2 Description of how it is made

Description

9.2.1 Derailleur

There are two different types of derailleur, the front and the rear.

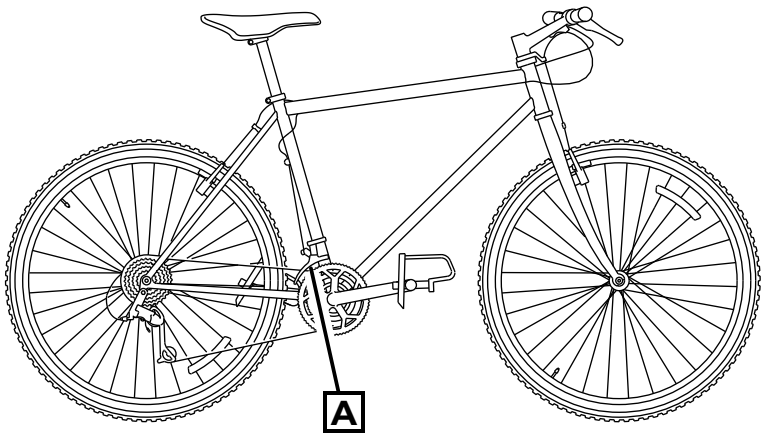
9.2.1.1 Front derailleur

The front derailleur (refer to Fig 1) contains two types of screws to keep the movement of the derailleur to a minimum. These screws are:

the stop screw low-gear

the stop screw high-gear

The function of these screws is to prevent the rider from over shifting . If this occurs, the chain will go out of the chain wheel.



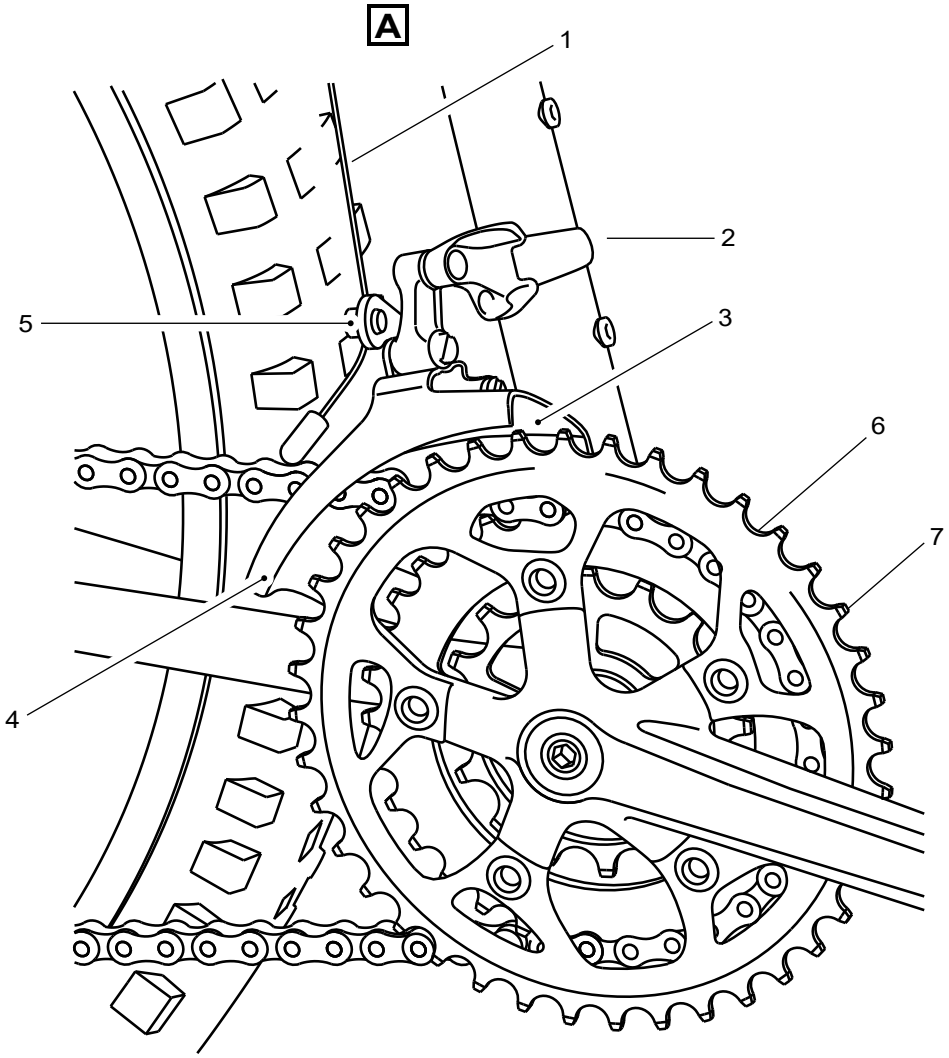


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Figure 1 Front derailleur

The derailleur is installed on the bicycle seat tube with a clamp and is parallel to the three front sprockets.

The shift cable is connected between the shifters on the handle bars and the cable clamp bolt on the front derailleur. This operates the derailleur. On the sprockets there is an inner and outer cage. The clamp attaches the cage.

9.2.1.2 Rear derailleur

The rear derailleur (refer to Fig 2) section contains the sprockets for the different gear changes. When the cable clamp bolt is tight, it holds the shift cable in its position. A screwed bolt holds the tension wheel.

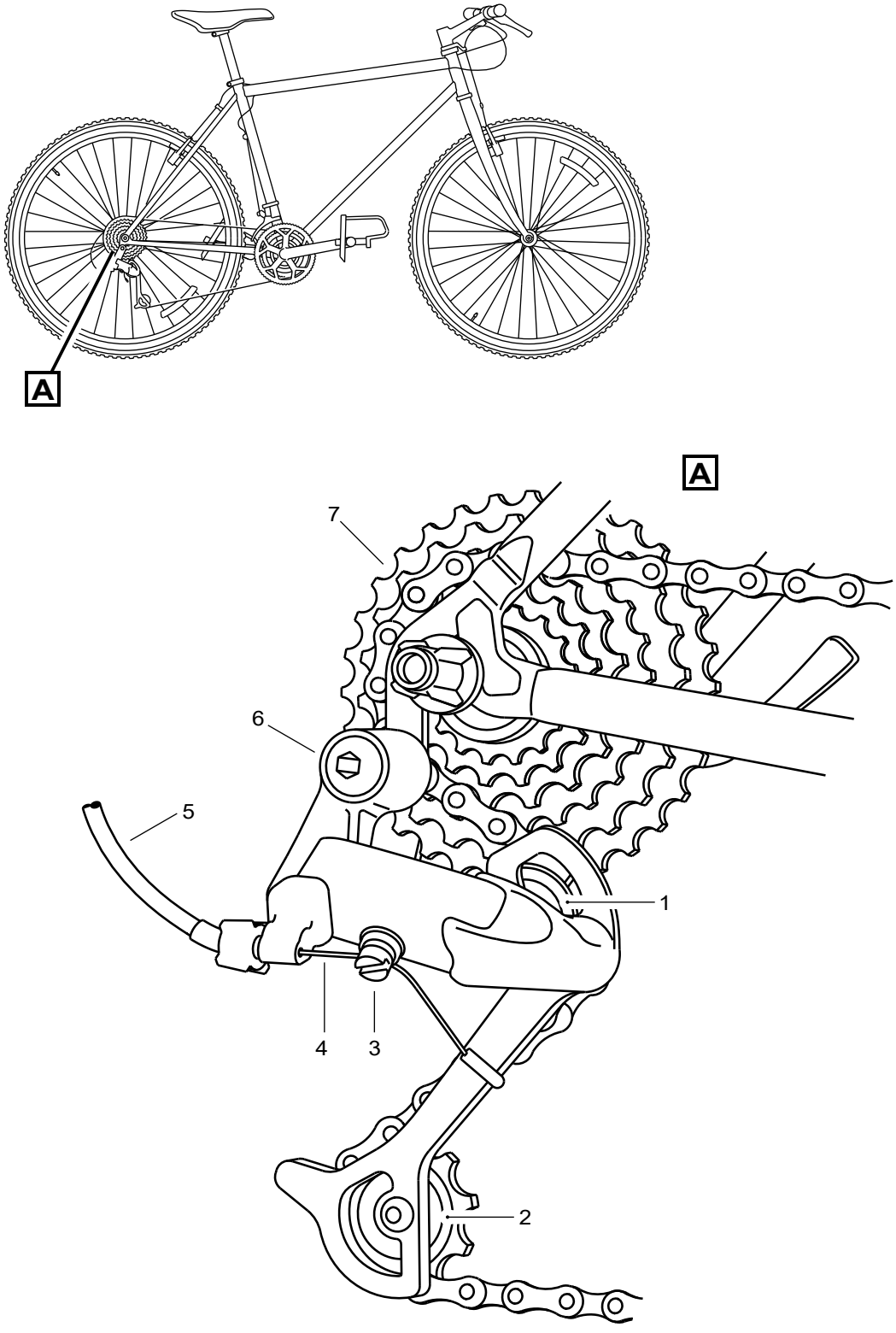

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Figure 2 Rear derailleur

The derailleur mounting bolt connects the derailleur to the frame. When the user attaches this bolt, this makes sure that the cage plates are parallel with the chain rings.

The guide wheel has the function to move the chain with the derailleur. It moves the chain from one sprocket to the other. The guide wheel must not move on its axis. If this occurs, there will be wear on the wheel. The position of the guide wheel is below the largest sprocket.

Section 9.3 Description of how it is made

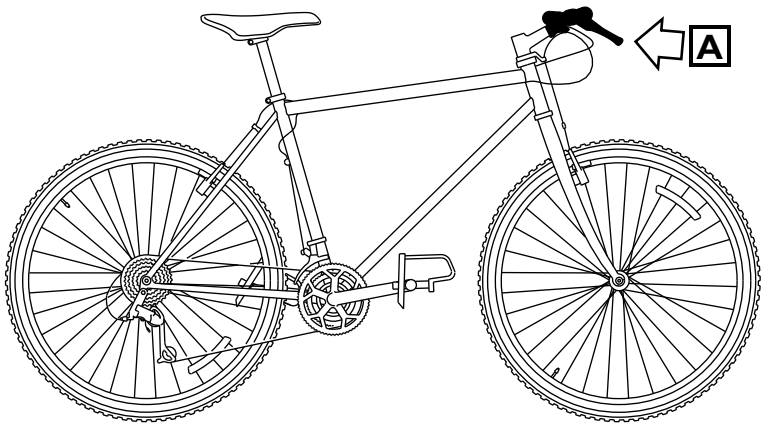
Description

9.3.1 Shifters

The thumb shifter is a usual type in modern bicycles. It is possible to adjust this type of shifter for operation in the index position or in the friction position. The differences between the two are:

- The index shifters change the gears with a click of a lever.
- The friction shifters hold the derailleur in its position by friction.

The thumb shifters (refer to Fig 3) are held on the bicycle with a screw. The paragraph that follows gives a description of a thumb shifter.



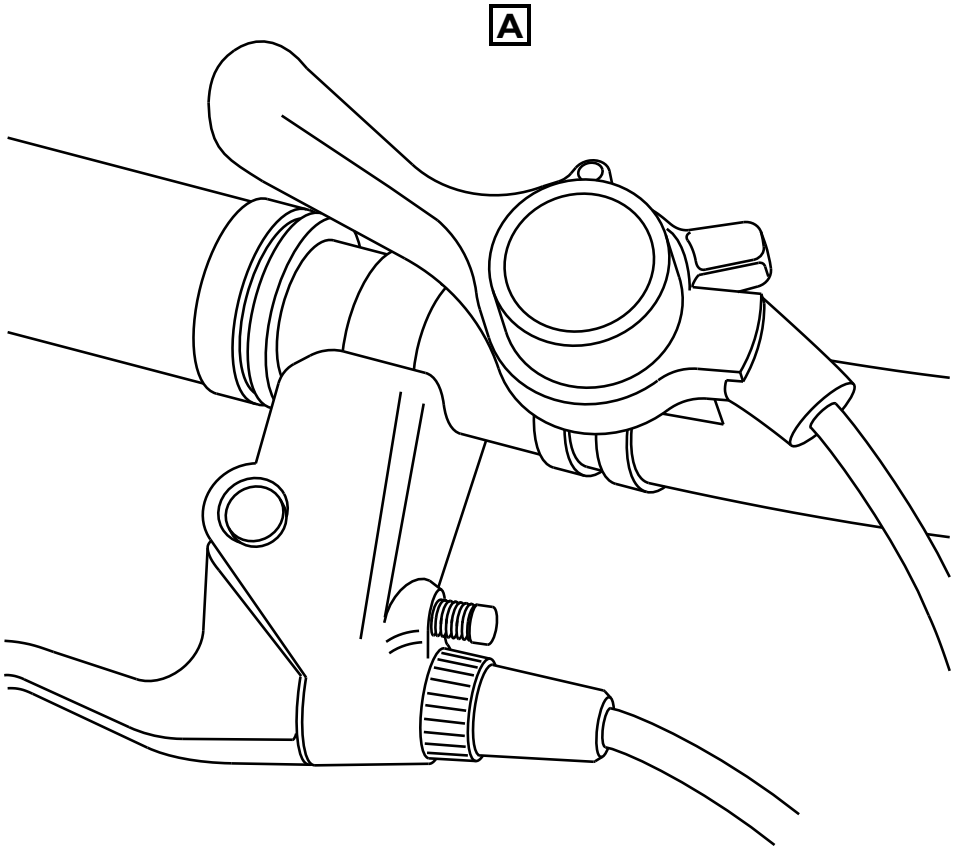


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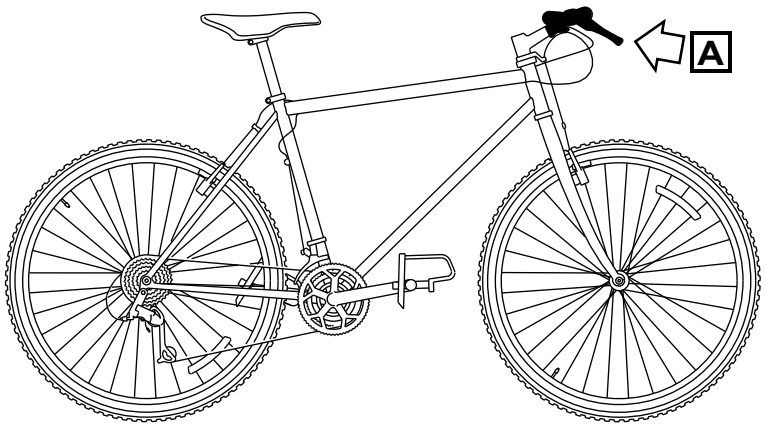
Figure 3 Thumb shifter index type

Applicable to: Mountain bicycle and (Mountain storm Mk1 or Brook trekker Mk9)

9.3.2 How a thumb shifter is made up

A wing nut (refer to Fig 4) from the top of the lever holds the thumb shifter. The lever is on top of the mount and the mount is on the handle bar with a nut. To remove the mount, it is necessary to loosen the nut of two turns (refer to Fig 5), then the mount can move from the handle bar from the top of the lever. The lever sits on top of the mount and the mount is fixed into pace on the handle bar by a nut.



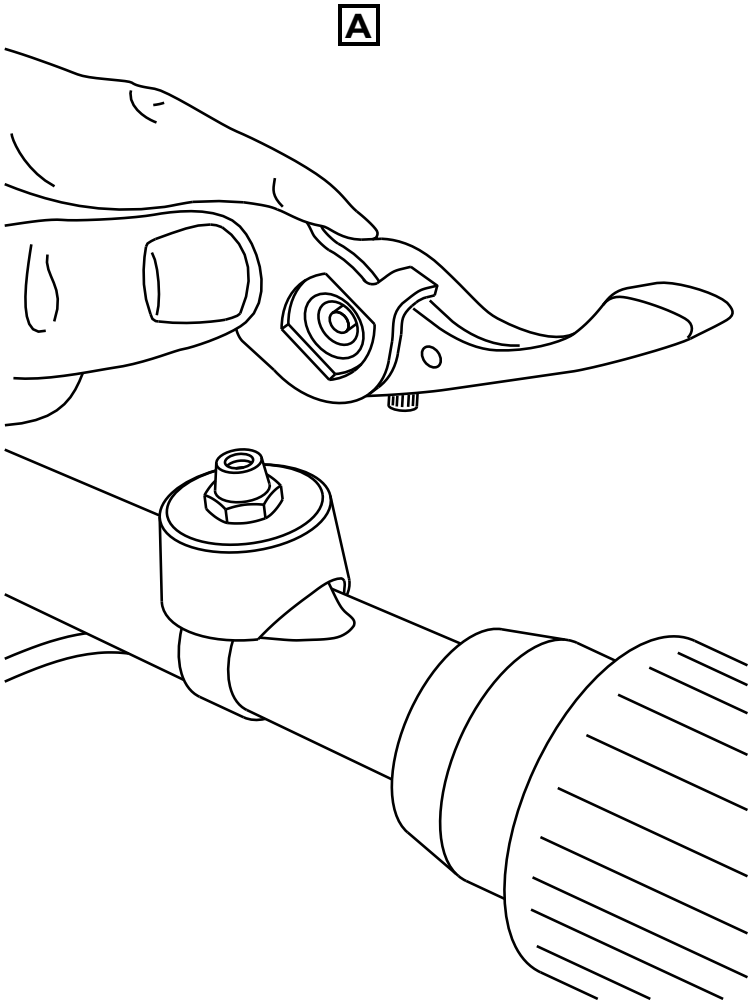


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Figure 4 Unscrew wingnut

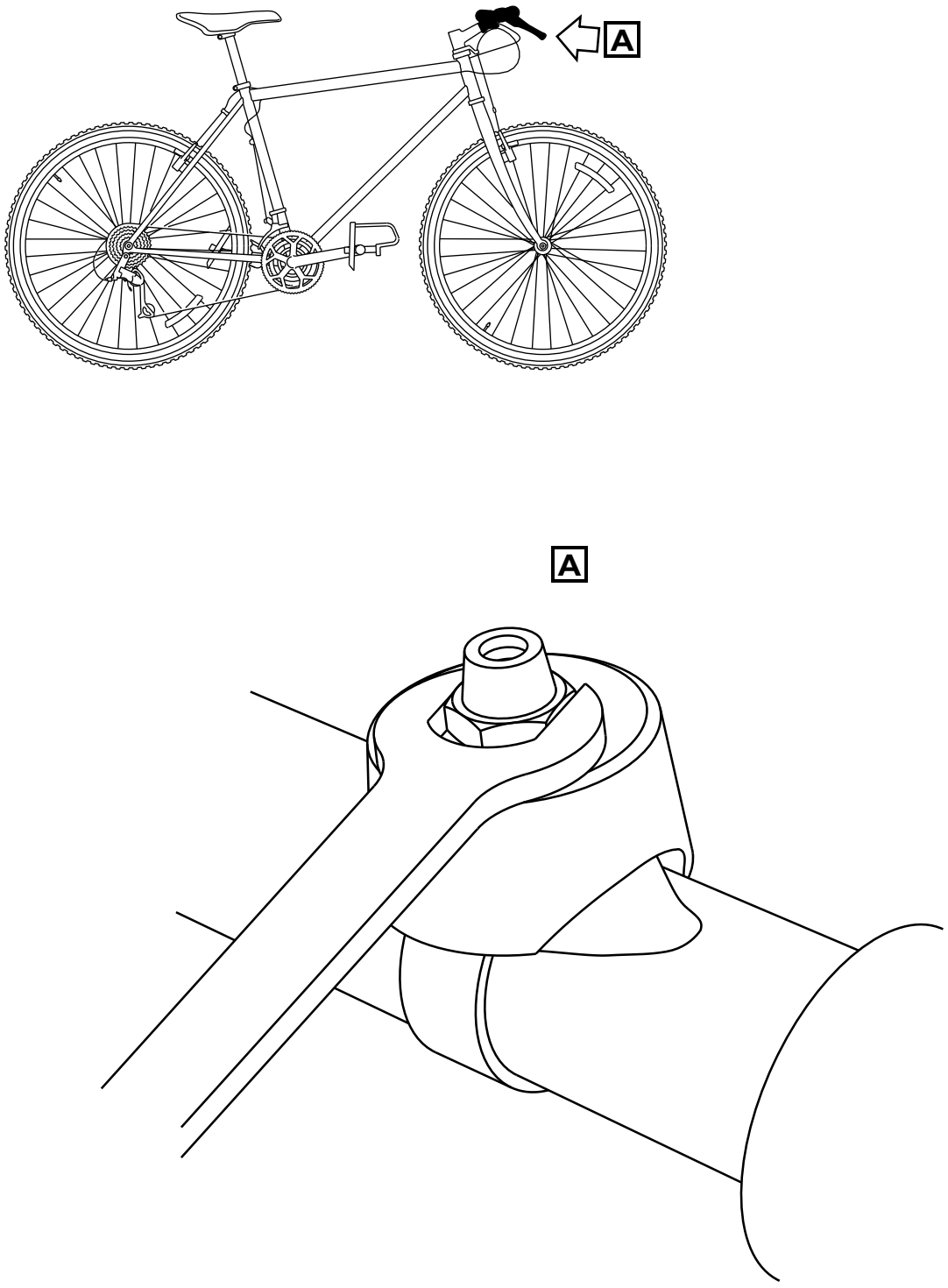

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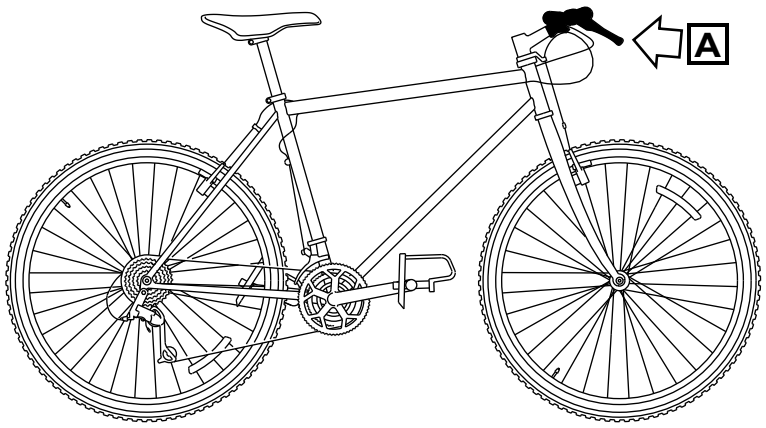
Figure 5 Loosen the nut

On modern models of this shifter, there is a clamp bolt that holds the shifter in its position (refer to Fig 6). The user can loosen the clamp bolt with an applicable tool. This lets the shifter release the handlebar.



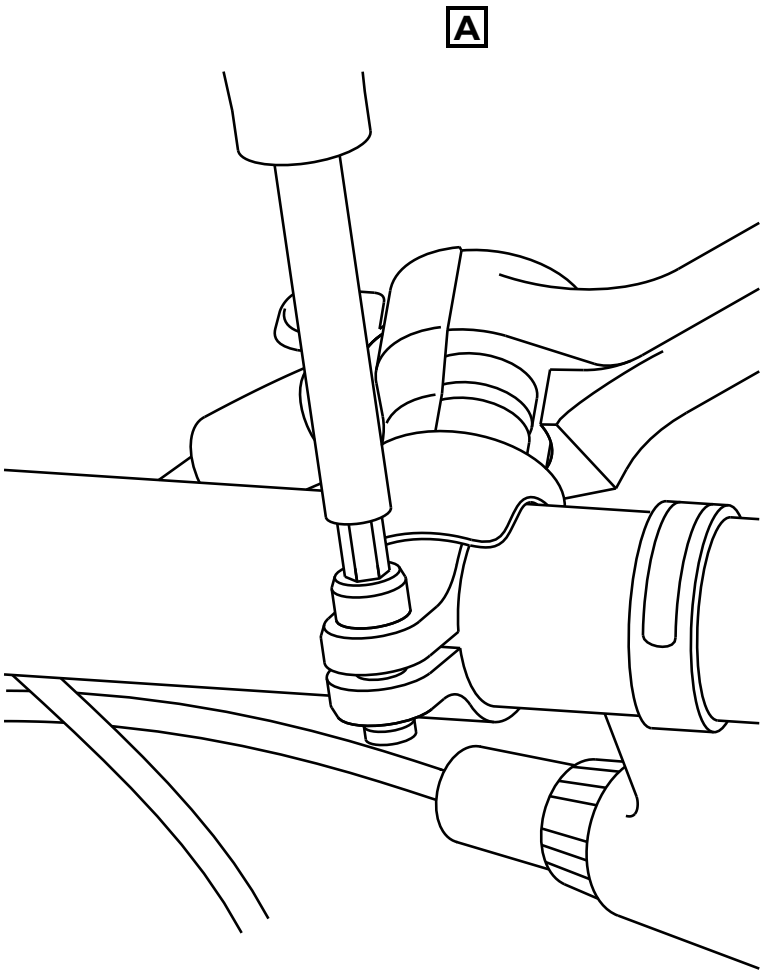


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Figure 6 Loosen the shifter clamp bolt

Section 10 - Electrical system

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Section 10.1 Description of how it is made and its function

Description

10.1.1 Lighting system

The illustration that follows (see Fig 1) shows the lighting system of the bicycle.

The lighting system is equipped with special high beam lighting. Do not use special high beam lighting when bicycling on roads during winter months.

The lighting system is faulty and will be replaced by 2013-03-15.

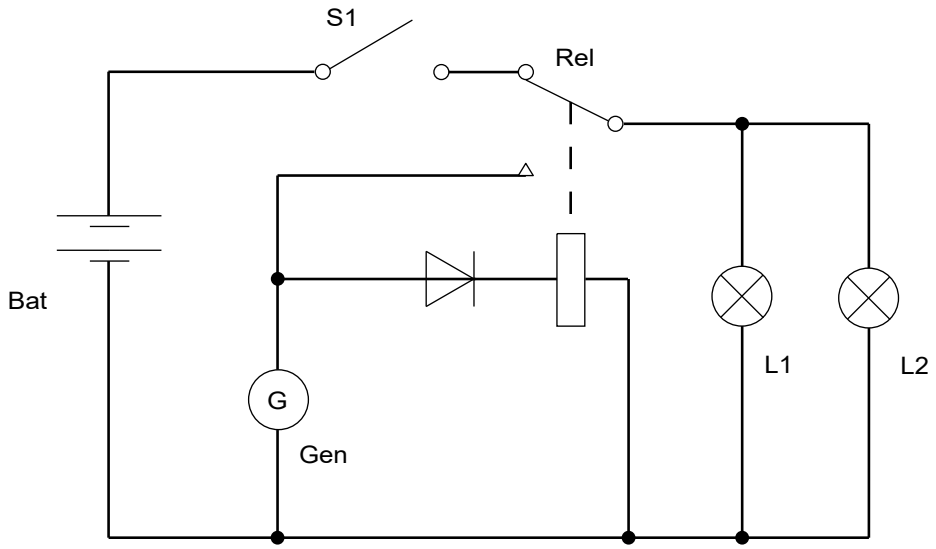

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Figure 1 Lighting system

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Section 10.2 - Horn

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List of tables

Section 10.2.1 Remove and install a new item

Preliminary requirements

Required personnel

Table 1 Required personnel

Person	Category	Skill level	Trade/Trade code	Estimated time
As required				

Support equipment

Table 2 Support equipment

Name	Identification/Reference	Quantity	Remark
Specialist toolset	Part No. KZ666/BSK-TLST-001	1 EA	
8mm Allen wrench	Part No. KZ666/BSK-TLST-001-08	1 EA	

Spares

Table 3 Spares

Name	Identification/Reference	Quantity	Remark
Horn	Part No. KZ444/Horn-001	1 EA	

Procedure

1 Safely hold the bicycle.

2 Remove the horn.

2.1 Use the 8mm Allen wrench from the Specialist toolset and remove the two Allen screws.

2.2 Remove the horn.

3 Install the new Horn.

3.1 Install the new Horn on the handlebars.

3.2 Use the 8mm Allen wrench from the Specialist toolset and tighten the two Allen screws.

Requirements after job completion

Required conditions

Table 4 Required conditions

Action/Condition	Data Module/Technical Publication
Safely discard the horn that you removed	Local Disposal Procedures

Section 10.3 - Lighting

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List of tables

Section 10.3.1 Assemble, install and connect procedures

Preliminary requirements

Production management data

Work area location

Zone	200	### Error unable to find target for reference to DMC-S1000DLIGHTING-AAA-D00-00-00-00AA-00HA-D ###
	300	### Error unable to find target for reference to DMC-S1000DLIGHTING-AAA-D00-00-00-00AA-00HA-D ###

Required conditions

Table 1 Required conditions

Action/Condition	Data Module/Technical Publication
Bike is stationary	

Support equipment

Table 2 Support equipment

Name	Identification/Reference	Quantity	Remark
Specialist toolset Descr/Specialist toolset	Part No. KZ666/BSK-TLST-001	1 EA	

Procedure

1 Impacted zones:Zone 200 and Zone 300

2 S1 exact

3 ELO-Box exact

4 Remove the lighting system from the packaging.

5 Make sure that the components in the package are the same as those on the Sect 10.3.3.1 Illustrated Parts Data - IPD

6 Install the light bulb to the front and rear lights (refer to - Remove and install a new item).

7 Attach the front light fitting on the top of the handlebar.

7.1 Apply the protective strip around the handlebar.

7.2 Pull the clamp open and put it around the protective strip with the light connector at the top.

7.3 Install the washer on the screw.

7.4 Use the correct screwdriver from the and tighten the screw into the hole at the bottom of the clamp. This safeties the clamp to the handlebar.

8 Attach the rear light fitting to the rear triangle of the bike frame.

8.1 Apply the protective strip around one of the two rear triangle up-tubes.

8.2 Pull the clamp open and put it around the protective strip. Make sure the light connector points rearwards.

8.3 Install the washer on the screw.

8.4 Use the correct screwdriver from the and tighten the screw into the hole at the bottom of the clamp. This safeties the clamp to the tube.

9 Attach the light with the white glass to the front connector.

10 Attach the light with the red glass to the rear connector.

Section 10.3.2 Remove and install a new item

WARNING

Make sure that the bulb is cool before you replace it.

CAUTION

Do not touch the glass of the bulb.

CAUTION

Make sure that the glass is clean before installing it on the light.

Preliminary requirements

Production management data

Work area location

Zone F11 Half front
Error unable to find target for reference to DMC-S1000DLIGHTING-AAA-D00-00-00-00AA-00HA-D

Work location on the handlebars

Work area location

Zone R11 Half rear
Error unable to find target for reference to DMC-S1000DLIGHTING-AAA-D00-00-00-00AA-00HA-D

Work location under the saddle

Required conditions

Table 3 Required conditions

Action/Condition	Data Module/Technical Publication
Light set to off	
Light removed from bicycle	

Support equipment

Table 4 Support equipment

Name	Identification/Reference	Quantity	Remark
Special Toolset	Set 578015T01-00	1 EA	
- Screwdriver	Part No. /BSK-SCRDV-001	1 EA	

Spares

Table 5 Spares

Name	Identification/Reference	Quantity	Remark
Bulb	CSN D00-00-00 Fig 01A Item 01000A/00A Part No. KZ777/LIRUS-L1-11	2 EA	
Kit	Set 578015B01-00	1 EA	
- Bulb	CSN D00-00-00 Fig 01A Item 02000A/00A Part No. KZ777/LIRUS-B1-12F	1 EA	1,
- Bulb	CSN D00-00-00 Fig 01A Item 02100A/00A Part No. KZ777/LIRUS-B1-12R	1 EA	1,
Glass	CSN D00-00-00 Fig 01A Item 02200A/00A Part No. KZ777/LIRUS-G1-10	1 EA	
Glass	CSN D00-00-00 Fig 01A Item 02300A/00A Part No. KZ777/LIRUS-G1-10H	1 EA	
- Glass	CSN D00-00-00 Fig 01A Item 02200A/00A Part No. KZ777/LIRUS-G1-10	1 EA	

1: Make sure that the new bulb is not cracked.

Safety conditions

WARNING

Make sure that the bulb is cool before you replace it.

CAUTION

Do not touch the glass of the bulb.

CAUTION

Make sure that the glass is clean before installing it on the light.

Procedure

1 From location on the handlebars, remove the glass Glass.

2 Remove the used front yellow bulb Bulb.

3 Discard the used bulb Bulb.

4 Remove the new white bulb Bulb from the kit Kit.

5 Install the new white bulb Bulb.

6 Install the glass Glass on the light.

7 Attach the light fitting on the handlebar.

8 Apply the protective strip around the handlebar.

9 Install the washer on the screw.

10 Use the special screwdriver Screwdriver from the toolset Special Toolset and tighten the screw into the hole at the bottom of the clamp. This safeties the clamp to the handlebar.

11 From location under the saddle Remove the glass Glass.

12 Remove the used yellow rear bulb Bulb.

13 Discard the used bulb Bulb.

14 Remove the new white bulb Bulb from the kit Kit.

15 Install the new white Bulb.

16 Drill a 4mm hole in the middle of the glass Glass in order to allow venting and heat evacuation when the light is switched on.

The glass with the hole may be ordered independently with the reference Glass.

17 Install the glass with the hole Glass on the light.

Requirements after job completion

Required conditions

Table 6 Required conditions

Action/Condition	Data Module/Technical Publication
Switch the lights on if necessary.	

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IPD - Lighting IPD

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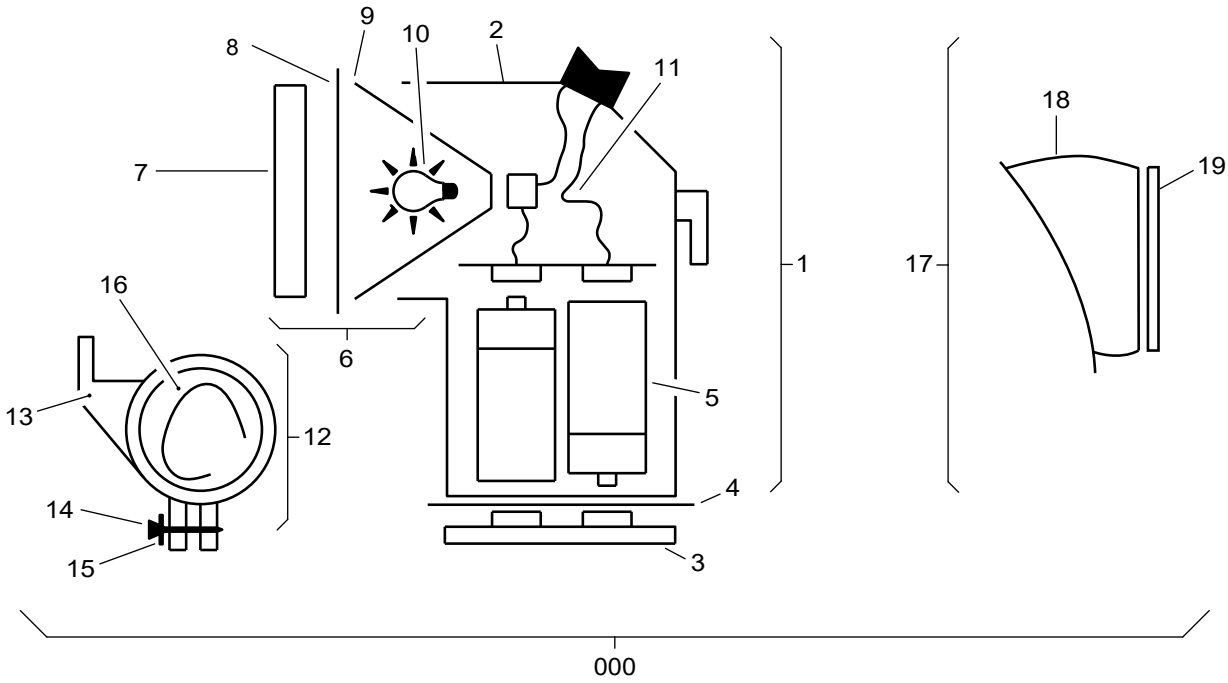

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Figure 1AA Light system

Fig	Item	Units per assembly /Unit of issue	NCAGE	Part No. NATO stock No.	Description	* Usable on code assy • MV/Effect	ICY
1AA							
	0	REF	KZ777	LRU1001			
	1	1	KZ777	LRU1010	• (FRONT)		
	2	1	KZ777	LRU1011	• •		
	3	1	KZ777	LRU1012	• • •		
	4	1	KZ777	LRU1013	• • • •		
	5	2	KZ777	LIRUS-L1-10	• • •		
	6	1	KZ777	LRU1018	• •		
	7	1	KZ777	LRU1019	• • •		
	8	1	KZ777	LRU1022	• • • •		
	9	1	KZ777	LRU1020	• • •		
	10	2	KZ777	LIRUS-L1-11	• • • •		
	11	1	KZ777	LRU1026	• •		
	12	1	KZ777	LRU-B001	•		
	13	1	KZ777	LRU-B003	• •		
	14	1	KZ777	LRU-B124	* * (ATTACHING PART)		
	15	1	KZ777	LRU-B556	* * (ATTACHING PART)		
	16	1	KZ777	LRU-B789	• • •		
	17	1	KZ777	LRU2010	•		
	18	1	KZ777	LRU1011	• • (REAR)		
	19	1	KZ777	LRU2018	• •		
	20	1	KZ777	LIRUS-B1-12F	• • •		
	21	1	KZ777	LIRUS-B1-12R	• • •		
	22	2	KZ777	LIRUS-G1-10	• • •		
	23	1	KZ777	LIRUS-G1-10H	• • •		

IPD - Illustrated Parts

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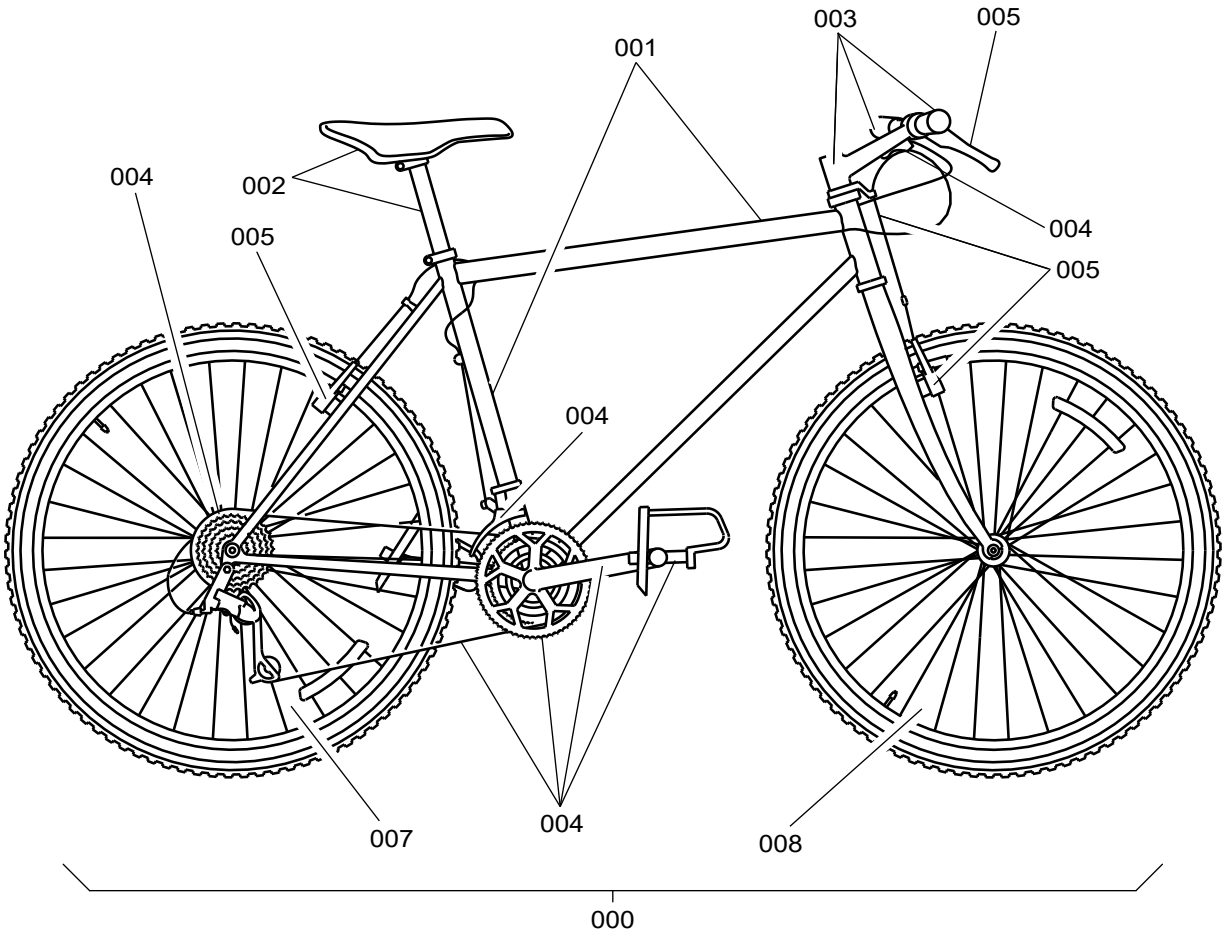
Section 11.1 Illustrated Parts Data - IPD



ICN-C0419-S1000D0361-001-01

Figure 1AA Bicycle

Fig	Item	Units per assembly /Unit of issue	NCAGE	Part No. NATO stock No.	Description	* Usable on code assy • MV/Effect	ICY
1AA							
	0	REF	KZ999	BICYCLE-001	Bicycle (qre 2) (xnt SP) (key Bicycle) (emb KZ999:LNS10276051) (nse 8145144345) (dhy F2408:1-4UD:02)	• MB	
	1	1 EA	KZ999	BICYCLE-001/1	• Frame assembly	• MB	
	2	1 EA	KZ999	BICYCLE-001/2A	• • Seat, assembly	• MB	
	2	1 EA	KZ999	BICYCLE-001/2B	• • Cruiser Seat, assembly	• MB	
	3	1 EA	KZ999	BICYCLE-001/3	• • Steering system	• MB	
	4	1 EA	KZ999	BICYCLE-001/4	• • Drive train system	• MB	
	5	1 EA	KZ999	BICYCLE-001/5	• • Brake sub-system	• MB	
	6	1 EA	KZ777	LRU1001	• • Light system	• MB	
	7	1 EA	KZ888	WH-001	• • Wheel, assembly rear	• MB	
	8	1 EA	KZ888	WH-002	• • Wheel, assembly front	• MB	
	9	1 EA	KZ888	CP-001	• • Computer	• MB	