

# Manual 927 E





# Contents

<b>Monark Exercise AB</b> .....	<b>4</b>
<b>Product Information</b> .....	<b>5</b>
<i>Facts</i> .....	5
<i>Serial number</i> .....	5
<b>Operating Instruction</b> .....	<b>6</b>
<i>Workload adjustment</i> .....	6
<i>Cycle adjustments</i> .....	6
<i>Meter instructions</i> .....	7
<i>Main display</i> .....	7
<i>Lower display</i> .....	7
<i>Heart rate</i> .....	8
<i>Calories</i> .....	8
<b>Trouble shooting guide</b> .....	<b>9</b>
<b>Service</b> .....	<b>10</b>
<i>Warning</i> .....	10
<i>Warranty</i> .....	10
<i>Service check and Maintenance</i> .....	10
<i>Batteries</i> .....	11
<i>Flywheel bearing</i> .....	11
<i>Crank bearing</i> .....	11
<i>Transportation</i> .....	11
<i>Replacement of brake belt</i> .....	11
<i>Brake belt contact surface</i> .....	11
<i>Chain 1/2" x 1/8"</i> .....	12
<i>Freewheel sprocket</i> .....	13
<b>Spare parts list</b> .....	<b>14</b>

## Important

Read the manual carefully before using the cycle and save it for future use.

## Monark Exercise AB

Monark has 100 years' experience of bicycle production. The Monark tradition has yielded know-how, experience, and a real feel for the product and quality. Since the early 1900s, Monark's cycles have been living proof of precision, reliability, strength and service. These are the reasons why we are now the word leader in cycle ergometers and the market leader in Scandinavia in transport cycles.

We manufacture, develop and market ergometers and exercise bikes, transport bikes and specialized bicycles. Our largest customer groups are within health care, sports medicine, public authorities, industry and postal services.

For more information: <http://www.monarkexercise.se>



# Product Information

*Congratulations on your new exercise bike!*

Monark 927 E Cardio Care is designed to in a simple way be used for exercise and rehabilitation. This model has an easily adjustable brake system and a digital electronic for displaying various parameters such as Speed in kilometers per hour, Distance in kilometers, Time in minutes and Heart Rate in beats per minute.

The meter also includes a separate Timer/Distance function display which can be set in minutes or in kilometres. For complete directions please read the part "Computer specifications".

## NOTE!

Use of the product may involve considerable physical stress. It is therefore recommended that people who are not accustomed to cardiovascular exercise or who do not feel completely healthy, should consult a physician for advice.

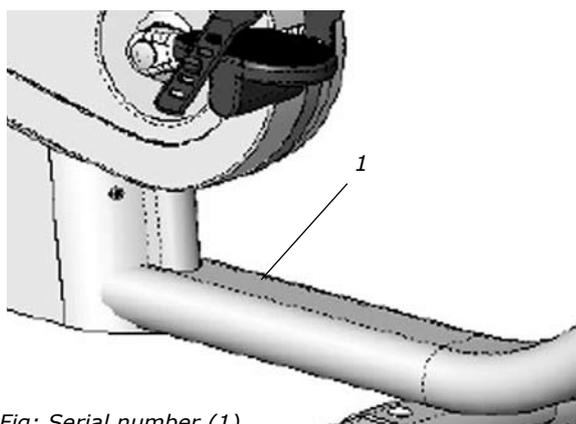


Fig: Serial number (1)

## Facts

- Small flywheel, 12 kg (26½ lbs)
- Adjustable saddle with quick release lever
- Adjustable handlebar
- Stable frame, solid steel tube
- Powder painted
- Wheels for easy transport
- Electronic meter with heartrate and timer

## Width

500 mm (20") at handlebar

640 mm (25") at support tubes

## Length

1240 mm (44")

## Height

1260 mm (20") at handlebar

780-1170 mm (31"-46") at seat

## Weight

46 kg (101 lbs)

Max user weight 250 kg (551 lbs)

## NOTE!

Chestbelt is not included but available as an accessory. Chestbelt must be used if you want to see Kcal in the display. Chestbelt Art. No: 9339-98.

## Serial number

The serial number is placed according to *Fig: Serial number*.

# Operating Instruction

## Workload adjustment

Cycling makes the flywheel rotate and store energy. Change of the workload is done by turning the workload adjusting knob. Turning the knob clockwise will increase the workload and turning it counter clockwise will decrease the workload. See *Fig: Tension knob*.



*Fig: Tension knob*

## Cycle adjustments

Seat height should be adjusted to a comfortable position. The appropriate height is to have the knee slightly bent when the sole of the foot is centred over the pedal axle with the pedal to the bottom position. To adjust the seat height turn the quick release bolt on the saddle post and pull until the saddle post is loose. See *Fig: Adjustments*.

The handlebar setting should be in a comfortable position when cycling. During longer exercise sessions it is recommended to occasionally change handlebar position. The handlebar is adjusted by loosening the locking knob on the handlebar. See *Fig: Adjustments*.



*Fig: Adjustments*  
1) Quick release bolt  
2) Quick release lever

## Meter instructions

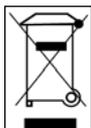
### Main display

<b>Speed:</b>	<b>0 - 99</b>	<b>km/h</b>
<b>Distance:</b>	<b>0 - 99.9</b>	<b>km</b>
<b>Time:</b>	<b>0 - 99</b>	<b>minutes</b>
<b>Heartrate:</b>	<b>50-240</b>	<b>bpm</b>

### Lower display

<b>Timer setting:</b>	<b>1 - 99</b>	<b>minutes</b>
<b>Distance setting:</b>	<b>0.1 - 99.9</b>	<b>km</b>
<b>Calories:</b> Only if chestbelt is used	<b>0-999</b>	<b>kcal</b>

Batteries: 4 x 1.5 V, R14  
Storing temperature: -10° C - +60° C  
Operating temperature: 0° C - +50° C



### Main display

Press any key or move the pedal gives a signal to the meter that activates all functions.

This display shows Speed, Distance, Time and Heartrate.

As soon as the subject begins pedalling activates the meter and all readings on the display. Time count starts when pedalling begins and Time count stops if pedalling is stopped. Time is only displayed in minutes.

A "P" in the Heartrate display indicate that the meter has not detected any heartrate signals. The signals comes from a wireless heartrate transmitter/ chestbelt which can be bought as an accessory (Art. No: 9339-98). The electrodes on the transmitter shall be moistened a little before it is put on the chest. Moistening the electrodes makes the pulse signal good already from start. The chestbelt/transmitter is to be placed just below the chest muscles.

### Reset key

Press RESET key to zero Speed and Distance in the main display. An automatic reset is also made after an automatic turn off of the computer.

### Turn off

After two minutes the computer will turn off automatically if there is no speed or HR-signal detected. At an automatic turn off all parameters are set to zero.



Fig: Display  
1) Main display  
2) Lower display  
3) MODE-key  
4) (+) -key  
5) (-) -key  
6) RESET-key

### Lower display

The count down function in the lower display window can be set in time or distance - minutes or kilometres. Press MODE key to activate. Display will then start flashing. While flashing press MODE again and it will change between time and distance. As long as it is flashing the figures can be changed. Use the buttons (+) or (-) to increase or decrease value. At setting value flashes for 15 seconds. To change setting again activate by press the MODE key. When pedalling starts the count down begins. When reaching zero a beeper sounds.

The calorie consumption shows in the lower display. Press MODE to change view between time, distance and calories.

#### NOTE!

To show KCAL in the display you must use chestbelt.

### Km/Miles

For setting of km or miles press MODE until "km" start flashing. Use the buttons (+) or (-) to change to miles.

### Maintenance

Do not expose the meter to direct sunlight or extremely high temperature. Do not use any dissolvents when cleaning. Use only dry cloth.

## Heart rate

If chestbelt is used (available as a accessory)

A person's heart rate can be measured with a chest belt that senses the electronic output of the heart. Chestbelt is not included but available as an accessory.

Fuss-free HR measurement requires that the belt is correctly placed. When it is correctly fitted the logo on the belt will be central and readable, outward and upright, by another person. Before putting on the belt, clean the skin where the belt is to be placed. The chest belt should be secured at a comfortable tension around the mid section, just below the breast muscle, see *Fig: Placement of the chest belt*. Moisten the electrodes before use, see *Fig: Electrodes on the back of the chest belt*. To make contact with the HR receiver on the bike, the distance should not be more than 100 cm. It is especially important when first used to identify the chest belt with the sensor, by standing close to get the HR (maximum 60 cm).

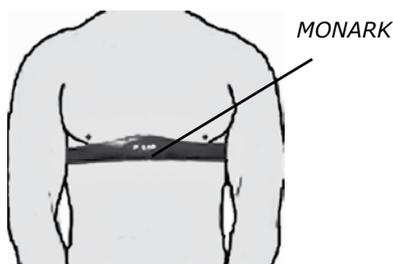
NOTE! Electromagnetic waves may disturb heart rate function. Cellular phones are not allowed to be used near the bike during test.

## Calories

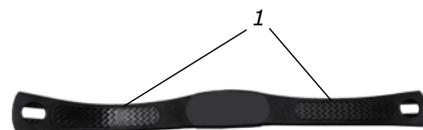
There have been different theories to how to calculate this since it is depending on a lot of factors and this means that it can only be seen as an estimate.

As standard calculation when we display calories on our calibrated bikes we use: 1 minute with 100W gives 7 kcal. It is easy to convert watts to calories if it was on the flywheel, the formula is  $1W=0,2388 \times 10^{-3}$  kcal/s with four decimals. But when you normally show calories you want to show the total amount of calories your body has used during your training, not only the calories "burnt" on the flywheel.

We have chosen the formula given above that we think complies with the results given for a standard cycle position.



*Fig: Placement of the chest belt*



*Fig: Electrodes on the back of the chest belt (1)*

# Trouble shooting guide

Symptoms	Probable Cause / Corrective Action
The display is not working	<ul style="list-style-type: none"> <li>• Check that the batteries are OK.</li> </ul>
No heart rate displayed  (chestbelt, not included, Art. No: 9339-98)	<ul style="list-style-type: none"> <li>• Check the chestbelt (battery). Wet the thumbs and place them on the electrodes. A low clicking sound will appear near battery lid while you click on the electrodes with one thumb.</li> <li>• Check that the chest belt is positioned correct on test person and tight enough. Check that the electrodes are wet, in hard cases it is necessary to use a contact gel or a mixture of water with a few drops of washing-up liquid. The level for HR signal can vary from person to person. Put chest belt on another known person who has a good pulse rendering.</li> </ul>
Uneven heart rate	<ul style="list-style-type: none"> <li>• Use an external unit for example a HR watch to check if it also indicates irregular pulse. If this is the case, there is probably disturbance in the room. Magnetic fields from high voltage cables, elevators, fluorescent tube etc. can cause the disturbance. Other electronic equipment could be placed too close. Move the bike to a different location in the room or change rooms. If an irregular HR remains it should be checked manually. If the HR remains irregular at work the person's health should be examined.</li> </ul>
There is a click noise with every pedal revolution (increases with the weight)	<ul style="list-style-type: none"> <li>• The pedals are not tight. Tighten them or change pedals.</li> <li>• The crank is loose. Check, tighten.</li> <li>• The base bearing is loose. Contact your dealer for service.</li> </ul>
Scratching sound is heard when pedalling	<ul style="list-style-type: none"> <li>• Check that the carriage block is taken off and that none of the covers is scratching.</li> </ul>
There is a click noise and a squeak noise when pedalling.	<ul style="list-style-type: none"> <li>• Loosen the chain.</li> </ul>

# Service

Note that the text about service and maintenance is universal and that all parts may not be relevant to your bike.

## Warning

Make sure the voltage indicated on the appliance corresponds to the local mains voltage before making connections.

## Warranty

### EU countries - Private use

If you are a consumer living in the EU you will have a minimum level of protection against defects in accordance with EC Directive 1999/44/EC. In short, the directive states for that your Monark Dealer will be liable for any defects, which existed at the time of delivery. In case of defects, you will be entitled to have the defect remedied within a reasonable time, free of charge, by repair or replacement.

### EU countries - Professional use

Monark Exercise products and parts are guaranteed against defects in materials and workmanship for a period of one year from the initial date of purchase of the unit. In the event of a defect in material or workmanship during that period, Monark Exercise will repair or replace the product. Monark Exercise will not, however, refund costs for labour or shipping.

### Other countries

Monark Exercise products and parts are guaranteed against defects in materials and workmanship for a period of one year from the initial date of purchase of the unit. In the event of a defect in material or workmanship during that period above, Monark Exercise will repair or replace (at its option) the product. Monark Exercise will as above for labour or shipping.

# Service check and Maintenance

It is important to carry out a regular service on your ergometer, to ensure it is kept in good condition.

Service action:

- We recommend isopropyl alcohol to disinfect the surface of the bike. Use a damp but not wet cloth to clean the surface you wish to disinfect.
- Always keep the bike clean and well lubricated (once a week).
- Periodically wipe the surface with a rust preventative, especially when it has been cleaned and the surface is dry. This is done to protect the chrome and zinc parts as well as the painted parts (4 times per year).
- Check now and then that both pedals are firmly tightened. If not the threading in the pedal arms will be damaged. Also check that pedal arms are firmly tightened on the crank axle, tighten if necessary. When the Ergometer is new it is important to tighten the pedals after 5 hours of pedalling (4 times per year).
- Check that the pedal crank is secure to the crank axle (4 times per year).
- Be sure that the pedals are moving smoothly, and that the pedal axle is clear of dirt and fibres (4 times per year).
- When cleaning and lubricating be sure to check that all screws and nuts are properly tightened (twice a year).
- Check that the chain is snug and there is no play in the pedal crank (twice a year).
- Check that pedals, chain and freewheel sprocket are lubricated (twice a year).
- Be sure that the brake belt does not show significant signs of wear (twice a year).
- Check that the handlebars and seat adjustment screws are lubricated (2 times per year).
- Be sure that all moving parts, crank and flywheel are working normally and that no abnormal play or sound exists. I.e. play in bearings causes fast wearing and with that follows a highly reduced lifetime.
- Check that the flywheel is placed in the center and with plane rotation.

## Batteries

If the meter is battery-operated, the batteries are in a separate package at delivery. If the storing time has been long the battery power can be too low to make the computer act correctly. Batteries must then be changed.

## Flywheel bearing

The crank bearing is long term greased and requires no supplementary lubrication. If a problem arises, please contact your Monark dealer.

## Crank bearing

The bearings in the flywheel are lifetime greased and require normally no maintenance. If a problem arises, please contact your Monark dealer.

## Transportation

During transport the brake cord should be tightened to prevent it from falling off the flywheel.

## Replacement of brake belt

To replace the brake belt remove covers if necessary. Make sure that the belt is loose.

Alt. 1: To loosen the brake belt on pendulum bikes with engine, connect power to the unit and raise the pendulum to 4 kp. Hold it there until brake belt is loose. Please note how the belt is assembled. Remove it from the bike. Attach the new brake belt and assemble the bike in reverse order.

Alt. 2: To loosen the brake cord on cycles with a weight basket set the basket to its upper position. Loosen the lock washer that is holding the cord and remove it from the tension center. Loosen or cut of the knot in the other end of the cord and then remove the hole cord from the bike. When assembling a new brake cord, first enter one end into the hole in the tension center, and tie a knot and let the knot fall into the bigger part of the hole. Lock the end of the cord with the lock washer.

Alt. 3: To loosen the brake belt on the bike remove all tension. Please note how the belt is assembled. Remove it from the bike. Attach the new brake belt and assemble the bike in reverse order.

### NOTE!

When replacing the brake belt it is recommended to clean the brake surface. See "Brake belt contact surface".

## Brake belt contact surface

Deposits of dirt on the brake belt and on the contact surface may cause the unit to operate unevenly and will also wear down the brake belt. The contact surface of the flywheel should be smoothed with fine sandpaper and any dust removed with a clean dry cloth.

Remove any potential covers and all workload on the brake belt and then remove it. Grind with a fine sand paper. Grinding is easier to perform if a second individual cautiously and carefully pedals the cycle.

Irregularities on the brake belt contact surface are removed by means of a fine sand paper or an abrasive cloth. Otherwise unnecessary wear on the brake belt may occur and the unit can become noisy.

Always keep the brake belt contact surface clean and dry. No lubricant should be used. We recommend replacing the brake belt when cleaning the contact surface. In regard to assembly and adjustment of the brake belt, see "Replacement of brake belt".

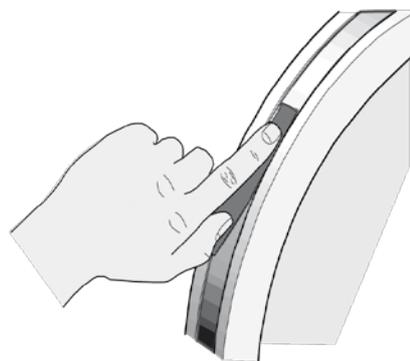


Fig: Brake belt contact surface

## Chain 1/2" x 1/8"

Check the lubrication and tension of the chain at regular intervals. In the middle of its free length the chain should have a minimum play (3) of 10 mm (1/4 inch). See *Fig: Chain adjustments*. When the play in the chain is about 20 mm (3/4 inch) the chain must be tightened. Otherwise it will cause abnormal wear of the chain and sprockets. Therefore it is always recommended to keep the chain play as little as possible. Loosen the hub nut(2) on both sides and tens the chain with the chain adjuster(1) when needed.

When the chain has become so long that it can no longer be tightened with the chain adjusters it is worn out and shall be replaced with a new one.

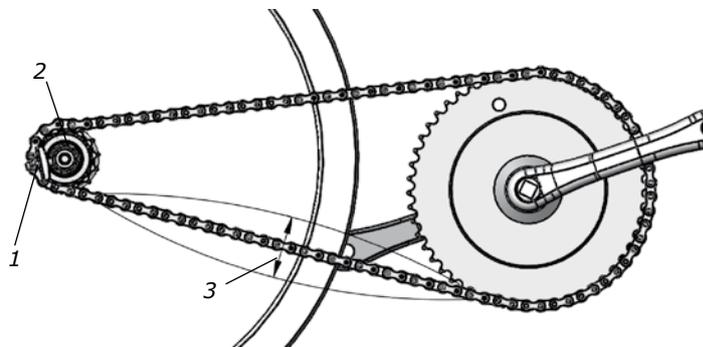
To adjust or replace the chain, remove covers if required.

When adjusting the chain, the hub nuts (2) become loose. Loosening or tightening the nuts on the chain adjusters (1) will then move the hub and axle forward or backward. Then tighten the nuts on the hub axle again. See *Fig: Chain adjustments*.

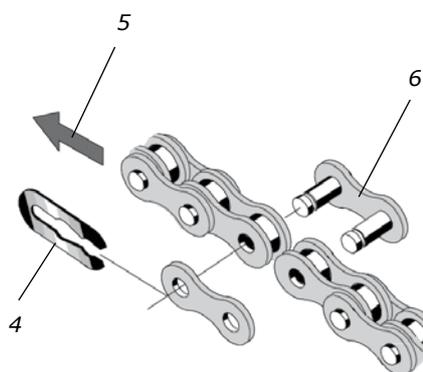
To replace the chain, loosen the chain adjusters as much as possible. Dismantle the chain lock (6) and remove the chain. Use a pair of tongs for dismantling spring. Put on a new chain and assemble the chain lock. The spring of the chain lock should be assembled with the closed end in the movement direction(5) of the chain. Use a pair of tongs for dismantling and assembling the spring (4). See *Fig: Chain replacement*.

NOTE! At assembly the flywheel has to be parallel with the centerline of the frame. Otherwise the chain and sprockets makes a lot of noise and wears out rapidly.

Then assemble the removed parts as above but in reverse order.



*Fig: Chain adjustments*  
1) Chain adjuster  
2) Axle nut  
3) Chain play



*Fig: Chain replacement*  
4) Lock spring  
5) Movement direction  
6) Chain lock

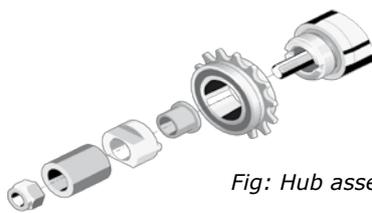
## Freewheel sprocket

When replacing the freewheel sprocket remove frame covers if necessary. Remove the chain according to section "Chain 1/2" x 1/8".

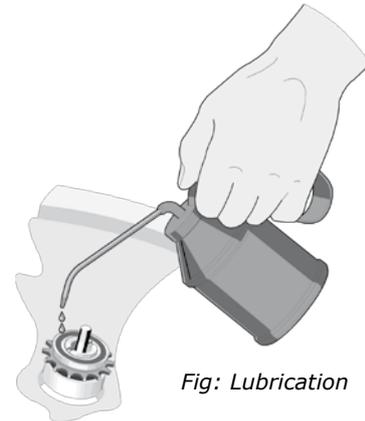
Loosen the axle nuts and lift off the flywheel. Remove the axle nut, washer, chain adjuster and spacer on the freewheel side. Replace sprocket-adapcter and assemble the new parts in reverse order according to the above.

NOTE! Do not tighten the axle nut completely. It must be possible to loosen the adapter-sprocket half a turn.

The sprocket should be lubricated with a few drops of oil once a year. Tilt the cycle to make it easier for the oil to reach the bearing. See *Fig: Lubrication*.

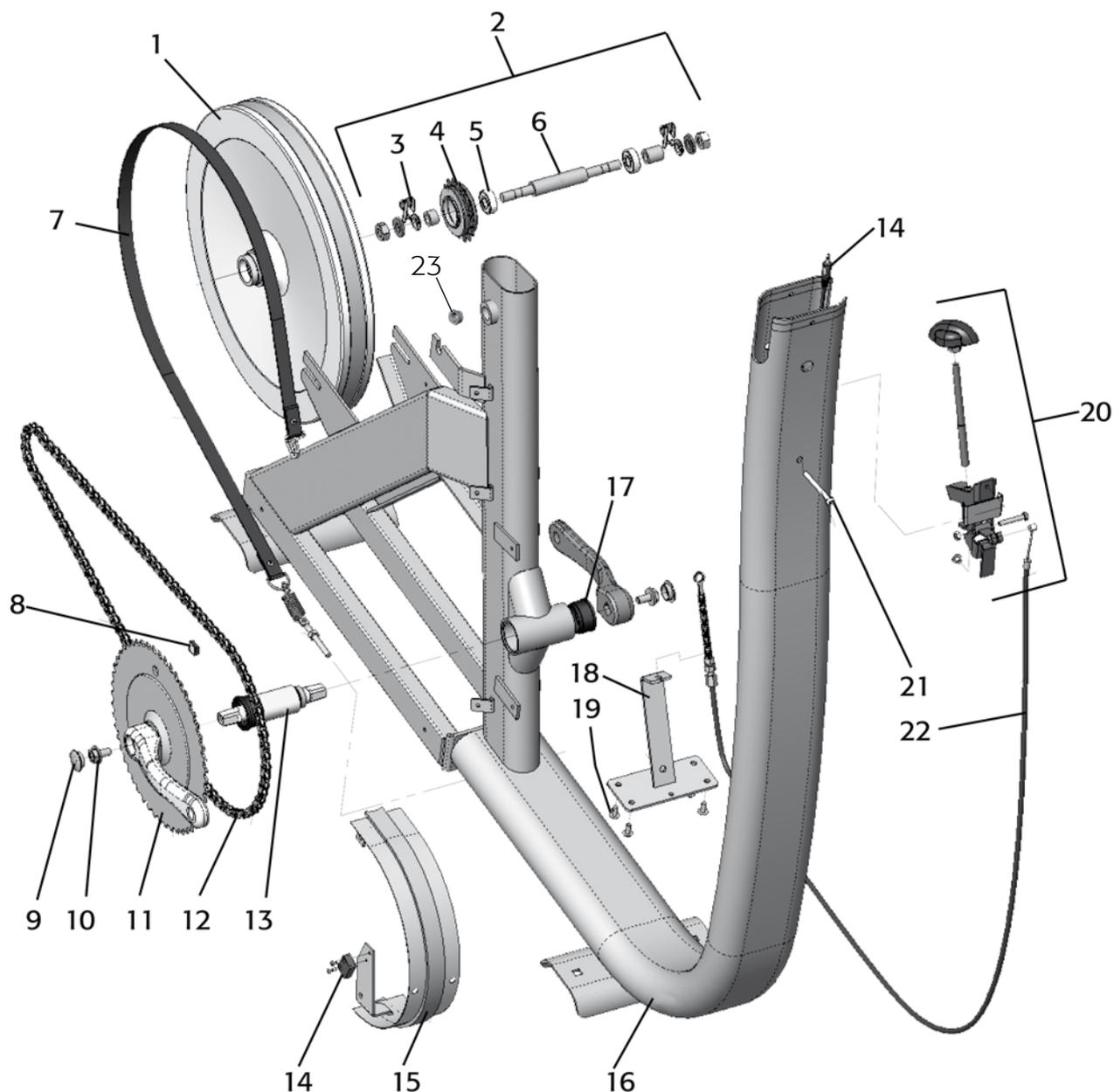


*Fig: Hub assembly*



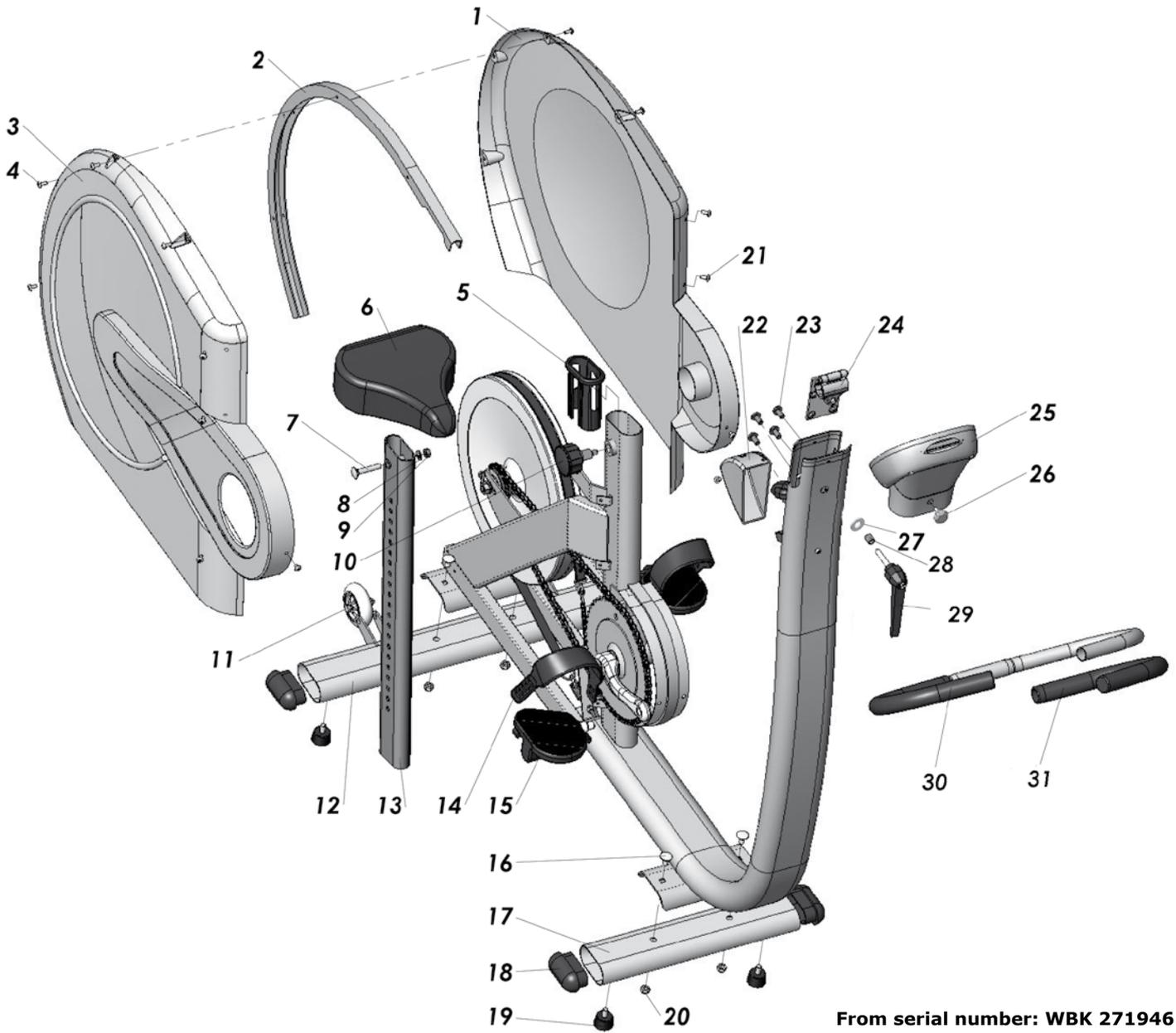
*Fig: Lubrication*

# Spare parts list



From serial number: WBK 271946

Pos.	Qty.	Art. No.	Description	Pos.	Qty.	Art. No.	Description
1	1	9309-30	Flywheel	12	1	9326-54	Chain, 100 L
2	1	9309-45	Wheel suspension complete set	13	1	8966-175	BB cartridge bearing
3	1	9000-12	-Chain adjuster (pair)	14	1	9328-162	Sensor with 1750 mm cable
4	1	76441	-Sprocket	15	1	9309-3	Joint clamp
5	2	19001-6	-Bearing 6001-2z	16	1	9328-1	Frame
6	1	9309-18	-Axle	17	1	8966-176	Support casing for BB-bracket
7	1	9309-65	Brake belt, complete	18	1	9309-10	Cable bracket
8	1	9371-16	Magnet	19	4	5673-9	Screw M5x12
9	2	8523-2	Dust cover for crank	20	1	9309-72	Tension device, complete
10	2	8523-115	Screw M8 x 1 x 20	21	1	5698	Screw M5 x 55
11	1	9300-430	Steel crank set, complete	22	1	9309-24	Tension cable, complete
				23	1	9328-33	Adaptor M20/M16



From serial number: WBK 271946

Pos.	Qty.	Art. No.	Description	Pos.	Qty.	Art. No.	Description
1	1	9309-53	Frame cover, left	18	4	9309-51	Plastic cap
2	1	9309-4	Aluminium profile	19	4	9328-26	Rubber foot
3	1	9309-52	Frame cover, right	20	4	5845	Locking nut
4	8	5675-9	Screw M5x6,5	21	16	5673-9	Screw M5x12
5	1	9309-131	Bushing f. saddle post	22	1	9309-74	Control cover
6	1	4992-7	Saddle	23	4	9337-38	Screw M8x16
7	1	5605-1	Screw M8x46	24	1	9328-2	Handlebar clamp
8	1	5864	Washer M8	25	1	9309-160	Digital meter, complete
9	1	5844	Locking nut	26	1	9000-105	Screw M5x10
10	1	9308-132	Locking knob	27	1	5864	Washer
11	1	9328-37	Transport wheel compl. (pair)	28	1	9326-89	Distance
12	1	9328-6	Support tube, rear	29	1	9326-707	Lever, complete
13	1	9328-130	Saddle post	30	1	9309-9	Handlebar, complete
14	1	76424	Foot straps (pair)	31	1	9309-71	-Handgrip (pair)
15	1	74435	Pedal (pair)		1	9309-150	Screw set
16	4	9300-12	Screw M8x16		1	9309-550	Decal set
17	1	9328-5	Support tube, front		1	9309-78	Handlebar black complete with clamp and handle



Version 1401  
Art. No: 7950-316

