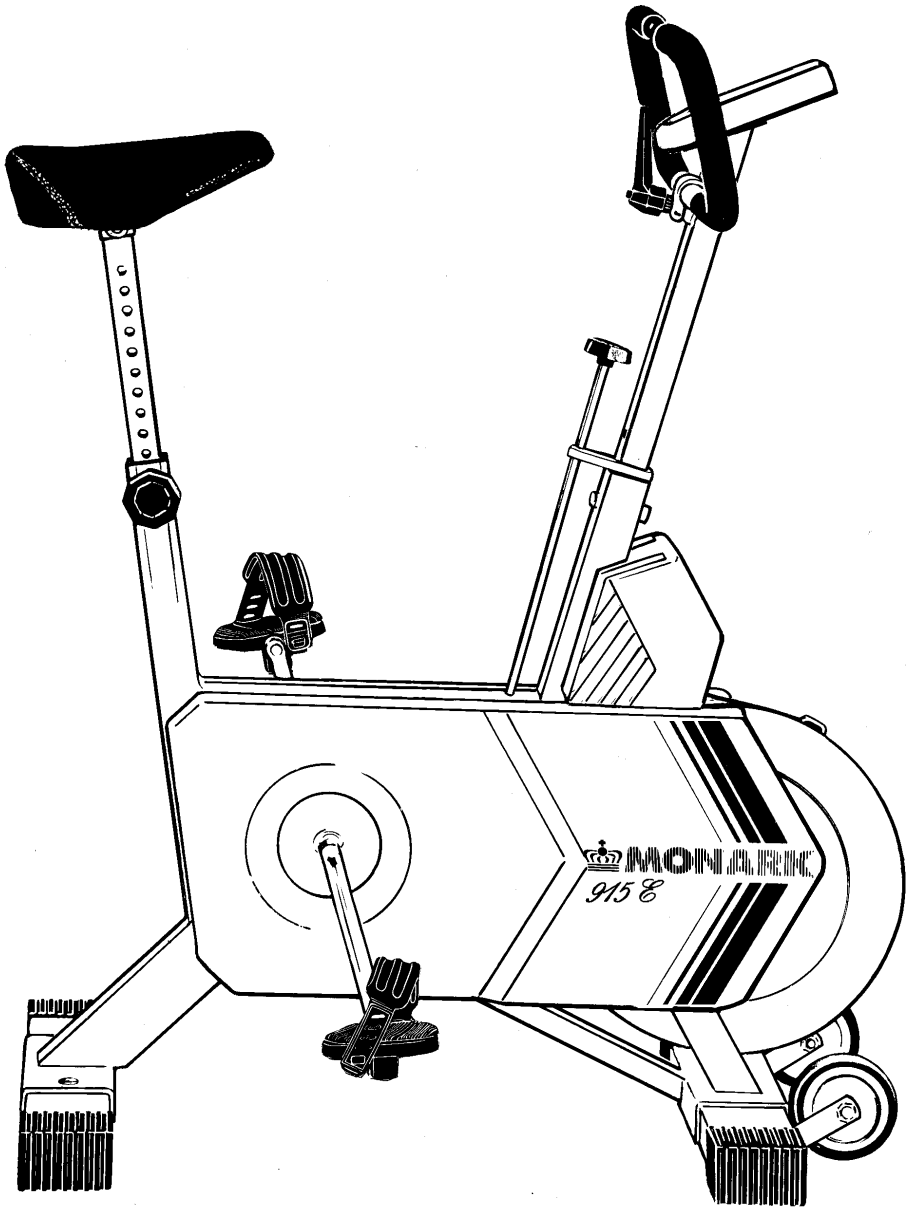
INSTRUKTION MANUAL

Monark model 915E



Monark Exercise AB

CONTENTS

CONGRATULATIONS

Congratulations on acquiring your Monark Energy 915
We hope that you get a lot out of training on this bicycle.
Training tips can be found at the end of this booklet.

Elderly people and physically weak persons should consult a doctor before starting their training.

GENERAL

Description

Monark has produced test and training bicycles for over 40 years. Your bicycle has been produced in accordance with the highest quality requirements.

Monark Energy 915 is equipped with variable-speed brake and rapid brake in the same control lever. With a simple hand grip you decide yourself what load to apply. The bicycle has a heavy flywheel with fixed rim, giving even velocity. This bicycle is suitable for all ages.

Guarantee

Even with a quality product there can arise occasional defects in material and manufacture that are covered by the guarantee. If such a defect should occur with your training bicycle you should, in accordance with the Consumer Purchases Act, contact the place of purchase.

Serial number

When contacting the place of purchase or manufacturer the model number and serial number of the bicycle should be given.

The model number is located on the side of the bicycle and the serial number under the rear of the bicycle.

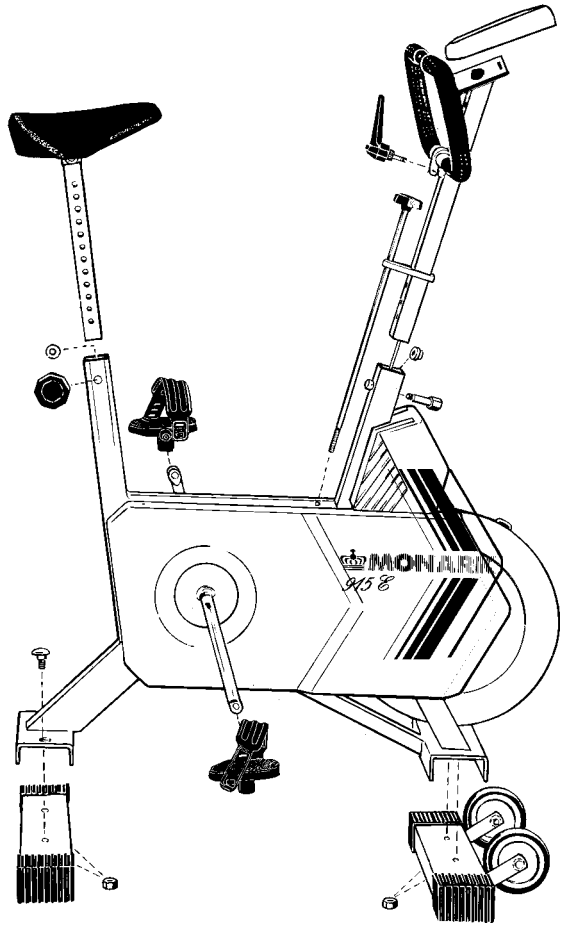
ASSEMBLY

Unpacking

Turn the box according to the instructions on the outside. Unpack all the parts from the transport packing and remove all the packing on the bicycle.

Check that all the components are present, as listed below:

1 set Handlebars	1
Monkey wrench	1
Bicycle	1
Socket wrench 10-13	1
Seat with seat post	1
Torque wrench TX25	1+1
Stay tube, front and rear	3
Thrust washer for locking knobs	1
Brake lever	3
O-rings for thrust washers	1
Speed indicator with attachment	1
Allen key	3
Locking knobs	1
Stop screw	1 pr
Pedals	1
Training programme	2
Toe clips	1



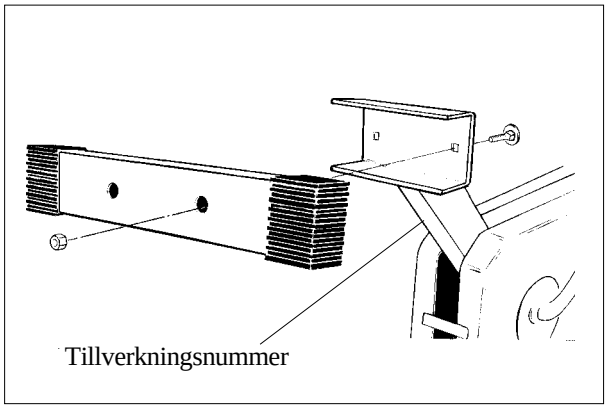


Fig. 1

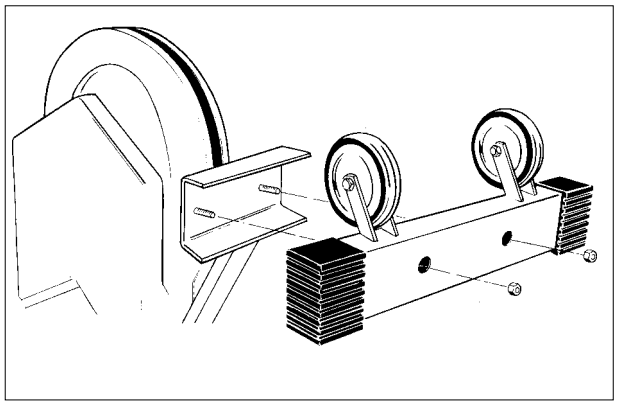


Fig. 2

1. Assembly of rear stay tube

Tip the bicycle forward. Assemble the rear stay tube from beneath with two coach bolts and two nuts as in the fig. 1.

NB Use the socket wrench provided when carrying out assembly.

2. Assembly of front stay tube

Tip the bicycle back and assemble the front stay tube from beneath as in the fig. 2. Note that the two M8-bolts are already-fixed in the bicycle. Return the bicycle to upright position.

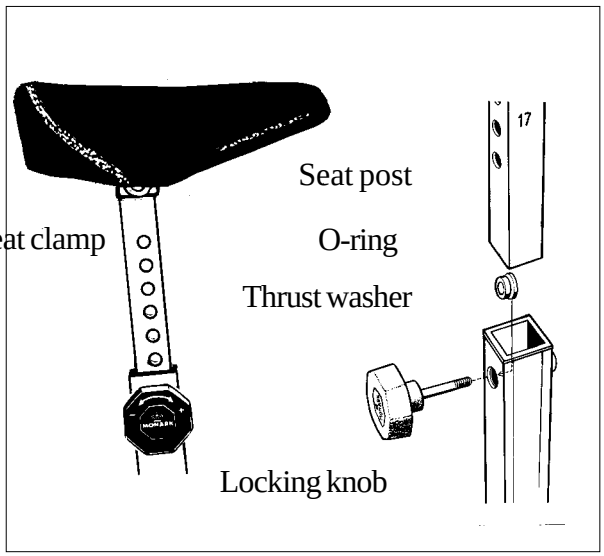


Fig. 3

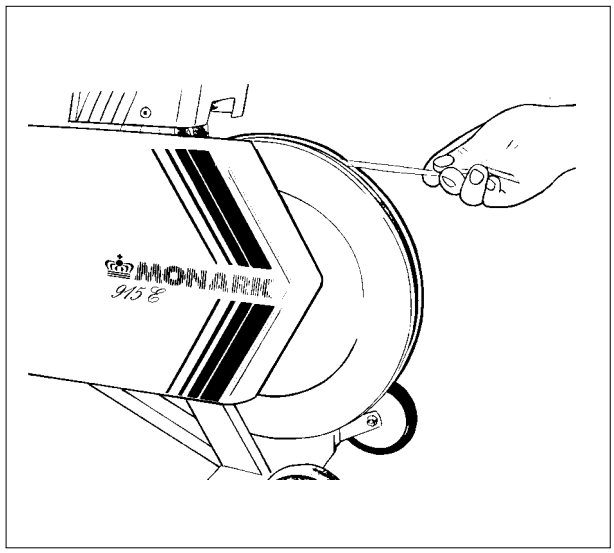


Fig 4

5. Assembly of seat and seat post

Assemble thrust washers and O-rings in the seat tube and in the horizontal bar of the seat post, see fig. Then insert the seat post into the seat tube on the frame. Push seat into seat post and secure with locking knob. Here you can adjust the distance to the handlebars. Adjust the seat to a suitable height.

NB Tighten well after making adjustments.

Brake wheel

NB Lift the friction band and remove the protective tape on the brake groove before use.It is most important that the whole of the protective tape is removed. Remnants of protective tape can otherwise lead to jerking in the loading device. Remove protective tape on the brake groove before using the bicycle. • The user of the bicycle should be fully informed as to how the brake works. See fig. 4.

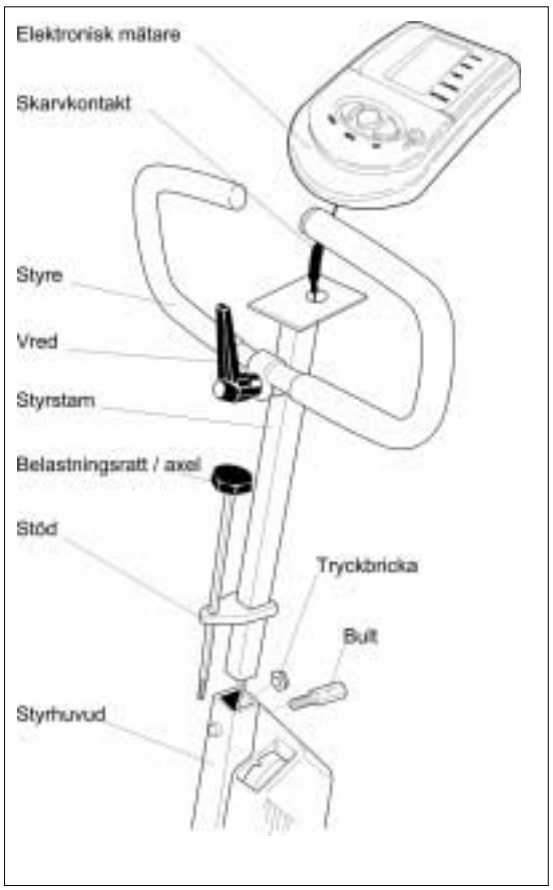


Fig. 5

3. Assembly of handlebar stem, bracket for speed indicator and water bottle, and brake lever attachment

Mount the pressure washer from the inside in the hole on the front frame tube and fit the O-ring onto the thrust washer from the outside.

Fit the bracket with speed indicator and water bottle onto the handlebar stem tube together with the plastic brake lever attachment. Then insert the handlebar stem into the front tube on the bicycle and screw tight with the locking knob. See fig.

The bracket for the speed indicator and water bottle can be secured at a suitable height with the stop screw.

4. Assembly of brake lever

Pass the brake lever rod through the hole in the plastic attachment and then down into the hole in the bicycle, see fig.

Screw in the knob clockwise about 10 turns. More turns give load on the brake wheel, which can be adjusted when cycling.

6. Assembly of pedals

The pedals are marked R (right) and L (left) at the end of the pedal axle.

Assemble the toe clip on each pedal with the accompanying washers, screws and nuts.

Thread the straps through the holes in the pedals and through the holes in the toe clips.

Fit the pedal marked R on the bicycle's right side. The pedal axle is right-threaded and should be screwed onto the crank in a clockwise direction. Tighten well.

Fit the pedal marked L on the bicycle's left side. The pedal axle is left-threaded and should be screwed onto the crank in an anti-clockwise direction. Tighten well.

NB After approx. 5 hours cycling or as soon as play in the axle attachment is observed, the pedals should be tightened.

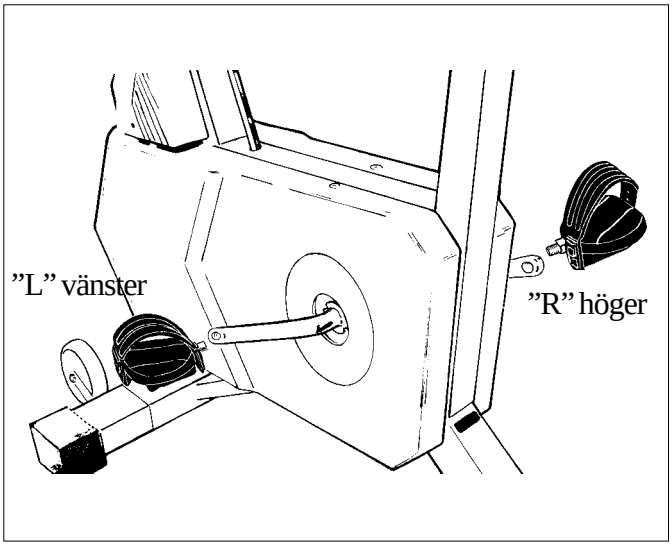


Fig. 6

Tåstöd = Toe clip
Fotrem = Toe strap
Vevarm = Crank

When cycling you supply large amounts of energy for storage in the brake wheel. A brake is put upon the kinetic energy by means of a friction band that runs round the brake groove of the brake wheel. A change in braking effect takes place either through changing the rate of pedalling or through increasing or reducing the tension of the friction band against the brake wheel.

On account of the large amount of energy that builds up in the brake wheel and as the brake wheel has no freewheel (the pedals turn with the wheel) it is most important that the user is fully aware of how the brake functions and has the shoes properly secured in the toe clip.

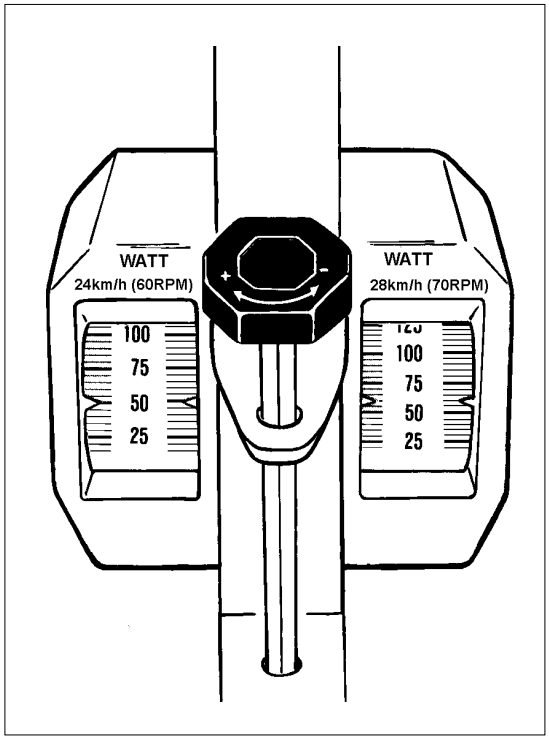


Fig. 7

Seat

Adjust seat to desired height by releasing the locking knob on the seat post. You have the right height when you are sitting comfortably with the sole of your foot over the pedal axle and the pedal is in its lowest position. Then the knee should only be slightly bent.

To change the distance between the seat and the handlebars, release the locking knob and adjust to the desired position.

To change the angle of the seat slacken the seat clamp under the seat.
NB Tighten well after making any adjustment.

BEFORE USE

Handlebars

The handlebars should be adjusted to give a comfortable cycling position. Adjust the height until a comfortable cycling position is obtained. Release the locking knob under the handlebars to adjust height.

Pedals

After about 5 hours cycling or as soon as there is any play the pedals should be tightened. Thereafter you should check periodically that they are still properly tightened. This is principally for your own safety. Play can also cause damage to the crank.

Your shoes should be securely fastened into the toe clip, as the brake wheel has no freewheel and the pedals always turn with the brake wheel's rotation.

- Check that the pedals are properly tightened.
- When using the bicycle the shoes should be properly secured in the toe clips.

Omvandlingstabell för watt vid olika hastigheter.

Valt wattal på skalan för 60 RPM(24km/h)

Vald hastighet o verkligt wattal

RPM	km/h	WATT									
40	16	20	40	60	80	100	120	140	160	180	200
50	20	25	50	75	100	125	150	175	200	225	250
60	24	30	60	90	120	150	180	210	240	270	300
70	28	35	70	105	140	175	210	245	280	315	350
80	32	40	80	120	160	200	240	280	320	365	400
90	36	45	90	135	180	225	270	315	360	405	450
100	40	50	100	150	200	250	300	350	400	450	500
110	44	55	110	165	220	275	330	385	440	495	550
120	48	60	120	180	240	300	360	420	480	540	600

FITNESS COMPUTER
Specification

PULSE	50 - 199	slag/min.
PULSE-HI	50 - 199	slag/min
PULSE-LOW	30 - (HI-10)	slag/min
SPEED	0 - 199	km/tim
TIMER (up)	0:00 - 99:59	min:sek
TIMER (down)	99:00 - 0:00	min:sek
CALORIES (up)	0 - 999	kcal
CALORIES (down)	999 -0	kcal
DISTANCE (up)	0.00 - 99.99	km
DISTANCE (down)	99.00 - 0,00	km

Power supply	1.5 V x 2 R6
Storage temperature	-10ºC - 60ºC
Operation temperature	0ºC - 50ºC

KEYS AND FUNCTIONS

MODE key
Use "MODE" key to set mode and cycle through the display windows as below:
PULSE HI -- PULSE LOW -- TIMER -- CALORIES -- DISTANCE

SET key
Press "SET" key to set desired value. If you hold/press this key for two seconds or more, you can advance the function value at a faster rate.

RESET key
A press on the key will clear the values separately for TIME, DISTTANCE, CALORIES (kcal) and HI/LOW pulse limit individually.
If you hold down the button for more than two seconds at normal display, all values except upper and lower pulse limit will be set to zero at the same time.

PROGRAMMING EXERCISE TIME:
Press "MODE" key to advance to the time window, then use "SET" key to enter your desired time. Each press of the SET key will advance time by one minute.

PROGRAMMING TARGET TRIP:
Press "MODE" key to advance to the distance window, then use "SET" key to enter your desired target trip distance. Each press of the SET will advance distance by 0.5 km.

PROGRAMMING CALORIES:
Press "MODE" key to advance to the calories window, then use "SET" key to enter your desired calories burned. Each press of the SET will advance calories by 10 Kcal.

PROGRAMMING HIGH AND LOW PULSE RATE LIMIT:
Press "MODE" key to advance to the pulse window, then use "SET" key to enter your desired high and low pulse rate/herat rate limit. Each press of the SET will advance 5 bpm. If your heart rate is above the high pulse limit you programmed, the computer will generate a beeping to warn you to stop exercise. In contrast, if your pulse rate is lower than your desired low pulse rate limit, the buzzer will also beep to remind you to continue your exercise.

PROGRAMMING TIMER
Use the MODE key to advance to the timer function. Then use the SET key to adjust to desired time. Every push on the SET key will increase the time by one minute.

PROGRAMMING CALORIES
Use the MODE key to advance to the KCAL function. Then use the SET key to adjust to desired amount. Every push on the key will increase the value by one minute.

PROGRAMMING DISTANCE
Use the MODE key to advance to the DISTANCE function. Then use the SET key to adjust to desired distance. Every push on the key will increase the distance by one km.

NOTE: When no key has been pressed for 5 seconds the display will return to normal.
The computer starts automatically when one of the keys is pressed or meter get speed indication - is pedalled.
In normal display, please make sure the ♥- symbol appears on the display before measuring your pulse rate. The ♥- symbol will automatically disappear to save power when no key has been pressed or no signal has been receiced for 30 seconds or more. By pressing "SET" or "RESET" the. symbol will turn on again.

CALIBRATION

Adjust the handwheel for the tension screw so trhat there is no tension left in the brake belt.
Fasten a 4 kg weight (our part no. 9000-211) at the joint bracket. See fig. ??.
When correctly set the weight -4 kp - will be read on the scale for watts - 60 RPM. See fig. ??.
Should there be a deviation, dismantle the chain guard. See fig. ??.
Adjust to the correct position by means of the adjusting screw and locking nut. See fig. ??.

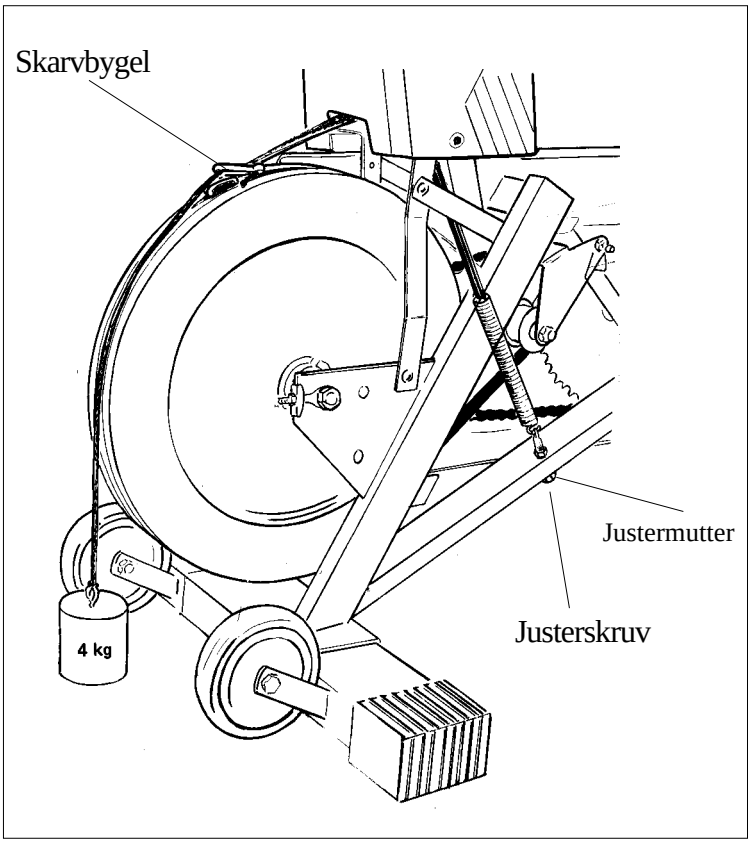


Fig. 9

REPLACEMENT OF BRAKE BELT

Remove the instrument cover assembled with two screws. See fig. ?.
Remove left side cahin cover by disassembling the connecting plate at the down side of the covers. Remove the screw on the upper side. Move the civer backwards and remove it from the bike.

Adjust the tension device so that there is no tension left in the brake belt. Loosen the screw under the joint bracket. See fig. ??. Loosen the screw fastening the belt in the watt scale. See fig. ??.

Replace the brake belt and assemble the the other parts in reverse order according to above.Note how it is assembled. The new belt must be assembled in the same way, see fig. ??.

Note: Too big a play in the bearing of the watt scale may cause an unevan operation of the load device. The nut for the watt scale bearing bolt should thenbe tightened. See fig.??. Make sure that it is not tightened too much as it may then operate in a bad way.

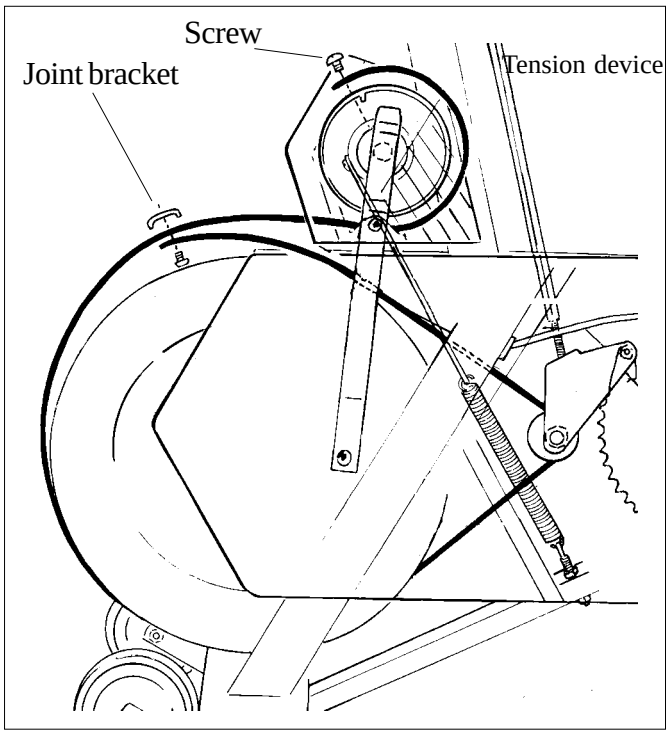


Fig. 10

BRAKE BELT CONTACT SURFACE - BRAKE BELT

The brake belt should be regularly checked to ensure that it has not suffered execessive wear. If it looks worn it should be replaced.
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 brake belt contact of the flywheel surface should then be ground off with a fine sand paper and any dust removed with a clean dry cloth.
Dismantle cover see
”REPLACEMENT BRAKE BELT”.
Set the tension device to min load.
Loosen the brake belt somewhat at the adjustment bolt and take off the brake belt to the side. Grind with a fine sand paper. See fig. 12.
Grinding is easier to perform if a second individual cautiously and carefull 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 is allowed to be used.
We recommend to replace the brake belt when cleaning the contact surface.
As regards assembly and adjustment of the brake belt, see previous page.

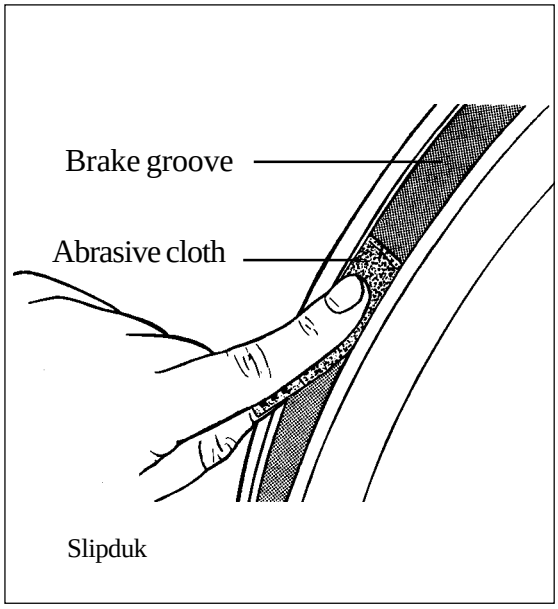


Fig.11

CLEANING THE BRAKE SURFACE

Release the tension control so that the brake groove sits loose around the flywheel. Then pull off the friction band from the wheel.

Rubbing down can be carried out more easily if someone sits on the bicycle and pedals slowly and carefully.

Unevenness in the brake groove should be removed with fine abrasive paper or abrasive cloth. Otherwise the friction band will suffer from excessive wear and noise will occur. Then wipe clean with a dry cloth.

Keep the brake groove clean and dry at all times. Under no circumstances use lubricant.
When necessary change the friction band at the same time as you clean the brake groove.
Lubricant must not be used on the brake groove.

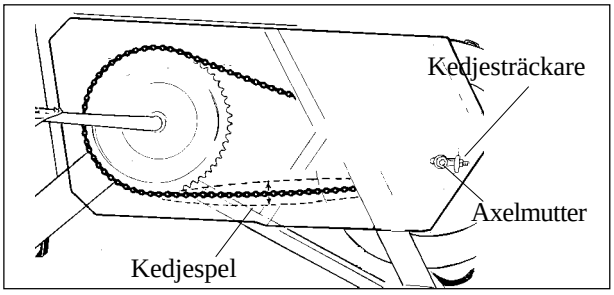


Fig. 12

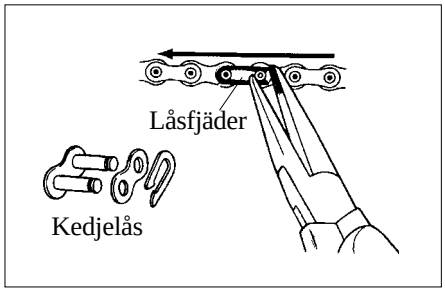


Fig. 13

CHAIN 1/2" x 1/8"

Check at regular intervals that the chain is correctly tensioned and sufficiently lubricated. At the mid-point of its free length the chain should have free play of minimum 5 mm, see fig. At 20 mm play the chain should be tightened. Otherwise abnormal wear will occur both on the chain and on the chain wheel. On account of this it is recommended that the amount of play is kept as close to the minimum as possible. When the chain has become so long that it can no longer be tightened with the chain tightener it should be changed for a new one.

Slacken the lower chain guard attachment. Remove the screws on the upper side of the guards. The guards should first be slid back a little, then they can be completely removed.

When adjusting the chain slacken the axle nuts on the brake wheel. The hub and axle can then be slid back and forth by slackening or tightening the nuts on the chain tightener. Afterwards retighten the nuts on the hub axle.

The hold down springs on the chain connecting links must be assembled with the closed end in the direction of motion of the chain. Pliers can be used to remove and assemble the hold down springs, see fig.

NB The wheel must be aligned parallel to the frame's centre line. Otherwise noise can arise from the chain as it can have a tendency to get caught on the cog teeth.

Then reassemble according to the above but in reverse order.

Play Hold down springs Chain connecting links Chain Chain tightener

REPLACEMENT OF THE FREEWHEEL SPROCKET

Remove left and right frame cover. For more info see ”REPLACEMENT OF BRAKE BELT”.
Dismantle the chain as described on page 10.
Loosen the axle nuts and remove the flywheel. Remove the axle nut, washer, chain adjuster and spacer on the freewheel sprocket side. Place the special remover (part No. 9100-14) in the adapter and place the spacer and axle nut outside. See fig 14.

NOTE: Do not tighten the axle nut completely. It must be possible to loosen the adapter-sprocket half a turn.
Replace sprocket-adapter and assemble the new parts in reverse order according to the above.

LUBRICATION SPROCKET

The sprocket should be lubricated with a few drops of oil once a year. Incline the cycle somewhat to make it easier for the oil to reach the bearing. See fig 15.

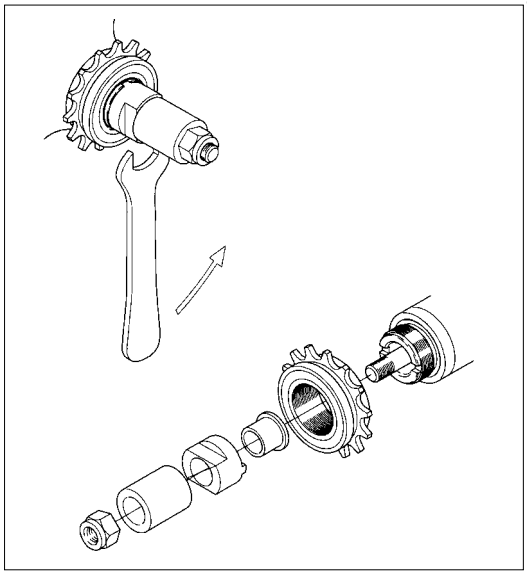


Fig. 14

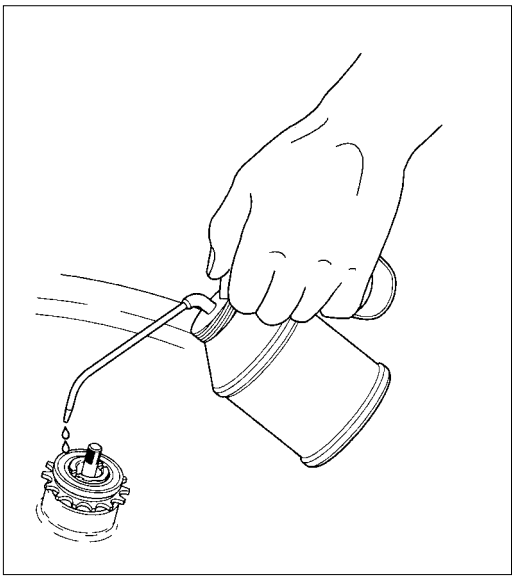


Fig. 15

REPLACEMENT of SENSOR FOR ELECTRONIC METER

Remov ethe left chain cover as described on page ??.
Take it apart at the cable connectors.
Loosen and remove the sensor screws.
Replace the sensor and assemble again accordin to the above in reverse order.
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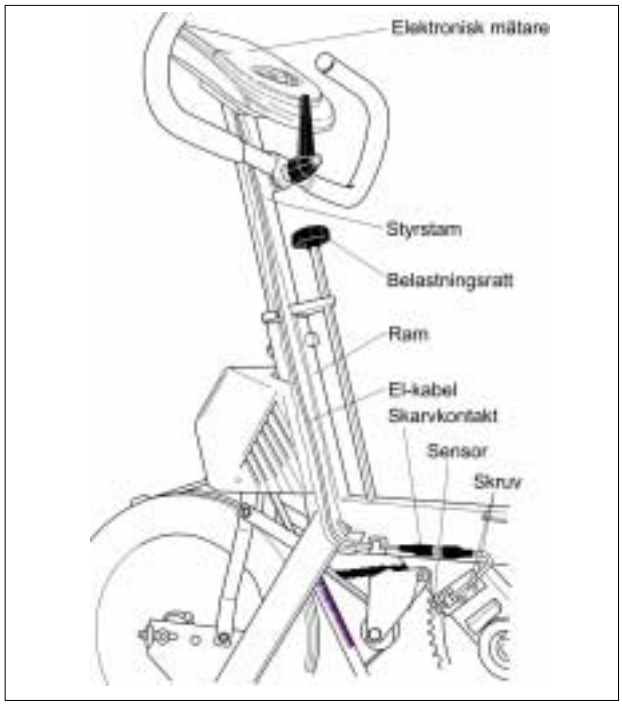

Crank bearing

The deep groove ball bearings in the crank bearing are lubricated for life and normally do not require any attention. If a fault in the bearing is observed or suspected then contact a specialist.

Brake wheel bearing

The bearings in the brake wheel are lubricated for life and normally do not require any attention. If a fault in the bearing is observed or suspected then contact a specialist.

Inspection routines

Check

- that the chain runs evenly and that there is no play in the crank bearing
- that the crank bearing is properly home on the crank axle
- that the pedals rotate smoothly and that the pedal axle is free from dirt
- that the pedal axle is properly home on the crank
- that the toe clip straps are in good condition
- that the brake wheel is positioned centrally and rotates evenly
- that the threads on the locking knobs for the handlebars and the seat are greased
- that the thrust washer is present on the handlebar and seat locking devices
- that the seat clamp is well tightened
- that the friction band does not show signs of excessive wear
- that the pedals and chain are lubricated

THE IMPORTANCE OF REGULAR EXERCISE

The human body is built for action – not for rest. Once upon a time this was a necessity: the struggle for survival demanded good physical condition. But optimal function can only be achieved by regularly exposing the heart, circulation, muscles, tendons, skeleton and nervous system to some loading, i.e. training.

In the old days the body got its exercise both in work and at leisure. In our modern society, however, machines have taken over an ever increasing share of the tasks which were formerly accomplished with muscular power alone. Our life has at an accelerated tempo been dominated by sitting, riding and lying. Thus, the natural and vital stimulation that tissues and internal organs receive through physical exercise has largely disappeared. Certain tissues such as muscles, bone and blood and also a number of bodily functions can adapt to inactivity – and to stress. Studies have proved that if you use 30 minutes for exercise like brisk walking, running, bicycling, swimming or skiing 2-3 times a week, your condition has been improved by some 15 per cent after a few months. The efficiency of the heart muscle will increase and joints and muscles grow in strength. The capillary density increases in the trained muscle and their enzymatic activities are enhanced. The body adapts to the new demands. The perceived exertion at a given rate of exercise becomes reduced.

With increased physical activity fatness is concentrated, the appetite functions “safer”, you can eat more without risk for overweight and thereby the risk of lack of important essential food nutrients decreases. For many individuals the effect of habitual physical activity also improves the wellbeing and it is a good feeling to have a potential to cope with straining situations.

What kind of exercise to choose?

1. You should have fun when exercising. Choose something you find pleasure in doing regularly.

2. To get o good effect out of the training you should choose a form of exercise that engages large muscle groups. Then the demand of increased blood flow and oxygen transport will be so great that heart will increase its pump capacity. Jogging, calesthenics, aerobic dancing, bicycling, swimming, skiing and walking are excellent examples of exercises meeting this requirement.

IN A FEW MONTHS YOU CAN GET 10-15 YEARS YOUNGER

If you cycle 30 minutes a few times a week you can lower your condition age with 10-15 years! Scientifically this is described as a reduction on the biological age. Externally, you are your usual self. Internally, however, you feel much younger. In other words: You can work harder. You feel more alert and healthy. Your ability to handle stress and problems increases. There are few better ways to improve your physical condition than to cycle. It does not over-tax your joints. It builds up your condition progressively and at your own pace – and you can make your training fit weather conditions.

DO I LOOSE WEIGHT WHEN I CYCLING?

Yes! You do lose calories. A few miles on your bike every day over one year, you will have lost the equivalent of 20 pounds of body fat. You will achieve best results if you combine exercise with healthier eating. A little less sugar, less butter on your bread or less fat in your frying pan. And a few miles on your bike every day. In a year you will have lost 20 pounds.

DO I GET STRONGER?

Cycling strengthens the muscles of the back, abdomen and legs. Daily chores become easier. Cycling also makes your heart stronger. Your pulse rate gets lower even when you exert yourself a little extra. Regular exercise also has a favourable influence on high blood pressures.

HOW DO I TRAIN?

1. Warm up 3-5 minutes with a low pedal resistance. Pedal about 12 mph (20 km/h).
2. Increase the resistance until you feel the training “somewhat hard”. Keep the speed for 2-5 minutes. Get off the Ergometer and rest a few minutes. Cycle again and then rest. Train at your own pace and with a comfortable pedal resistance. After a few weeks you can increase the resistance.
3. Before ending, pedal a few minutes with a light resistance, in order to step down your training.

Total time about 30 minutes.

Strength training:
1. Give yourself a thorough warm-up.
2. Pedal with a heavy resistance for 5-10 seconds, then rest 45-60 seconds. Repeat this 5-10 times.

It is a good idea to combine your cycle training with gymnastics for 5 minutes, as this will give you a physiologically well-balanced form of training.

(Elderly people and physically weak persons should consult a doctor before starting their training.)

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EXERCISE AB

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