Manual 837 E

MONARK
SPORTS & MEDICAL

Contents

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 world leader in cycle ergometers and the market leader in Scandinavia in transport cycles.

We manufacture, develop and market ergometers, 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: www.monarkexercise.se

Product Information

Congratulations on your new Recumbent!

The Monark Cardio Comfort 837 E is designed to be used for exercise and rehabilitation. This model is perfect for people with back or weight problems where it is difficult to sit on a normal bike.

Monark model 837 E is a recumbent bike with adjustable resistance. The bike is equipped with an electronic meter showing speed, time, distance, calories and pulse. At the end of the handlebar are handgrips with built in pulse.

NOTE!
Use of the product may involve considerable physical stress. It is therefore recommended people who are not accustomed to cardio or do not feel completely healthy to first consult a physician for advice before use.

Facts

- Large, well-balanced flywheel 20 kg (44 lbs)
- Easy entrance and stable saddle
- Wheels for easy transport
- Stable frame, solid steel tube
- Powder painted
- Adjustable backrest
- Electronic display with heart rate in handgrips or chestbelt

Width
665 mm (26”) at handlebar
460 mm (18”) at support tubes

Length
1700-2000 mm (67-79”)

Distance pedal and saddle
490-890 mm (19-35”)

Height
980 mm (39”) at seat
800 mm (31”) at front

Weight
70 kg (154 lbs)
Max user weight 250 kg (550 lbs)

Accessories
Chestbelt
Extra foot plates

Serial number

The serial number of your Ergometer is placed according to *fig: Serial number.*

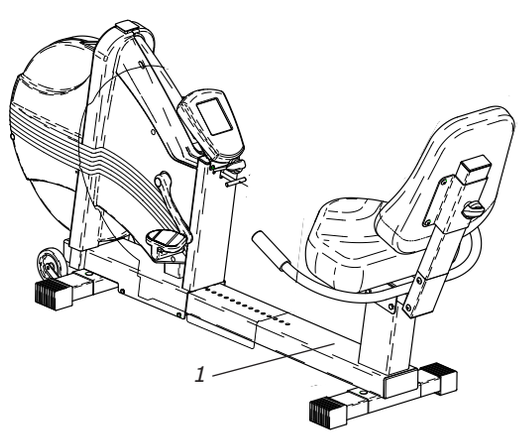


Fig: Serial number (1)

Operating Instruction

Workload device

When pedalling the subject stores energy in the flywheel. The flywheel is then braked by means of a brake belt/cord which runs around the flywheel. The workload is changed either by using other pedalling speed or by increasing or decreasing the tension of the brake belt/cord against the flywheel by using the tension knob (2). A change of brake force is showed in the window (1). See *fig: Workload device.*

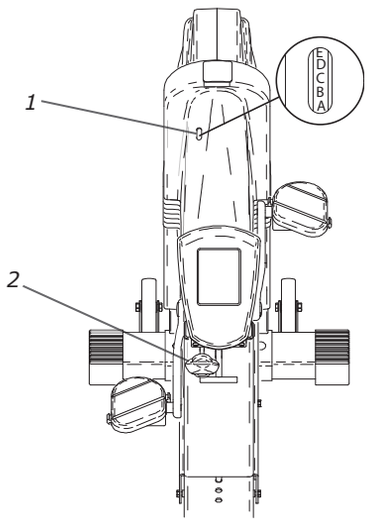


Fig: Workload device
1) Workload window
2) Tension knob

Cycle adjustments

The pedalling unit can be moved forward or backward and locked in a comfortable position. To move the unit pull the catch (1) and place the pedals at a suitable distance. Let go of the catch and make sure that it locks (a ”click sound”). The back support can also be adjusted up and down to a comfortable position by loosing the knob (2). See *fig: Adjustments*.

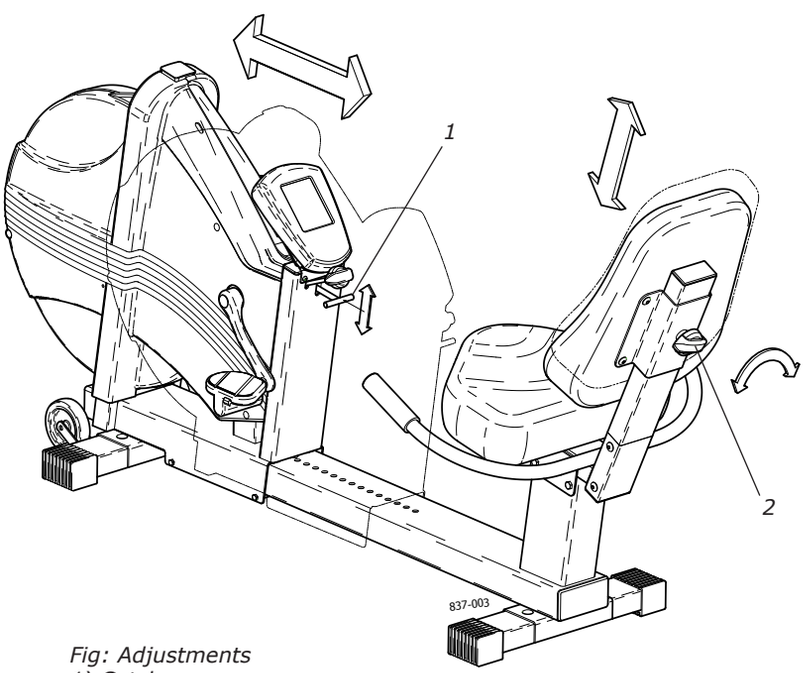
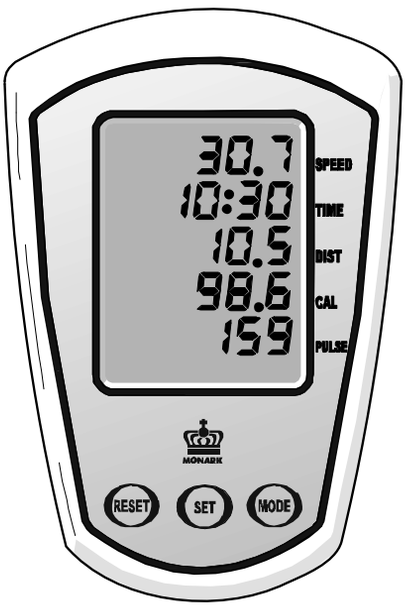


Fig: Adjustments
1) Catch
2) Locking knob

Computer specifications

Display		
SPEED	0 - 199	km/h
TIME (up/down)	0:00-99:59	min:sec
DISTANCE	0:0- 99:99	km
Calories, CAL	0 - 999	kcal
Heart rate, PULSE	50 - 199	bpm
PULSE HI	50 - 199	bpm
PULSE LOW	30-(over-10)	bpm



Batteries: 1.5 V x 2, R6 (AA)
Storing temperature: -10º C - +60º C
Operating temperature: 0º C - 50º C

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

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, DISTANCE, 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 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/heart 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 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 distance:
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.

NOTE: When no key has been pressed for five 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 heart symbol appears on the display before measuring your pulse rate. The heart symbol will automatically disappear to save power when no key has been pressed or no signal has been received for 30 seconds or more. By pressing SET or RESET the heart symbol will turn on again and the pulse function will get active.

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

Battery replacement pulse sensor

Lifting of the cap by prying it up in the intended slot. The batteries, 2 x 1,5 V size R6 (AA), can then easily be changed. Be sure to place the (+)- and (-)-ends in the right order. See *fig: Batteries pulse sensor*. Replace the cap.

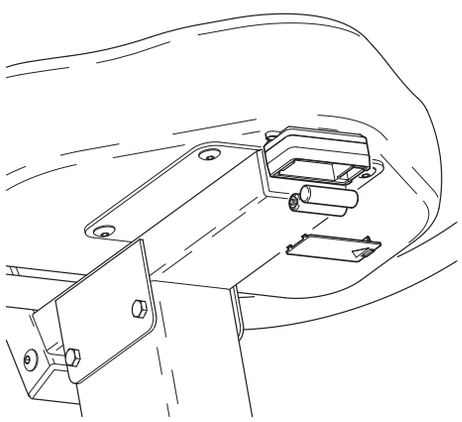


Fig: Batteries pulse sensor

Trouble shooting guide

Symptom	Probable Cause/Corrective Action
The display is not working.	Check that the batteries are OK.
No heart rate.	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. Use another external HR monitor to check the belt. Check that the chestbelt is positioned correctly 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 chestbelt on another known person who has a good pulse rendering.
Uneven heart rate.	Use an external unit, for example a pulse 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 to close. If irregular pulse remains we recommend measuring HR manually. If HR still remains irregular at workload test person's health need to be examined.
There is a click noise with every pedal revolution (increases with the weight).	The pedals are not tight. Tighten them or change pedals. The crank is loose. Check, tighten. The base bearing is loose. Contact your dealer for service.
Scratching noise is heard when pedalling.	Check that the carriage block is taken off and that none of the covers is scratching.
There is a click noise and a squeak noise when pedalling.	Loosen the chain.

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.
- Clean and lubricate your Ergometer weekly.
- 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 that pedals are firmly tightened. If not, the threading in the pedal arms will be damaged. Also check that the 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 (2 times per 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 (twice a year).
- Be sure that all moving parts, crank and flywheel are working normal and that no abnormal play or sound excsists. 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 be changed.

Crank bearing

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

Flywheel bearing

The bearings in the flywheel are greased and do not normally require maintenance. If a problem arises, please contact your Monark dealer.

Transport

At transport the brake belt 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 belt on pendulum bikes with a motor, turn the power on and move the pendulum to 4 kp. Hold it there until the brake belt is loose. Observe how the belt is connected. Take it apart and 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 off the knot on the other end of the cord and then remove the whole cord from the bike. When assembling a new brake cord, first enter one end into the hole in the tension center, 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 belt on other bikes remove all possible tension. Observe how the belt is connected. Take it apart and 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 covers and loosen the tension on the brake belt. Smoothe with fine sandpaper. This 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 sandpaper 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”.

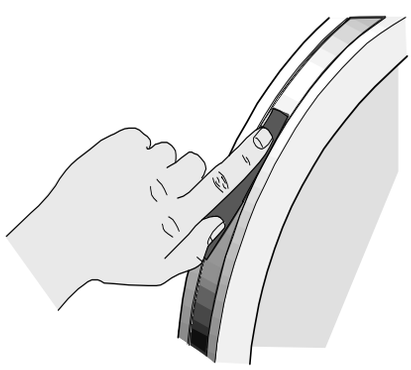


Fig: Brake belt contact surface

Chain 1/2“ x 1/8“

It is strongly recommended to keep the chain clean. Dirt build-up on the chain will cause excess wear. A chain lubricant and solvent for normal road bikes may be used.

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) it must be tightened otherwise it will cause abnormal wear of the chain and chainwheels. Because of this it is always recommended to keep the chain play as little as possible. Loosen the hub nut(2) on both sides and tense the chain with the chain adjuster(1) when needed.

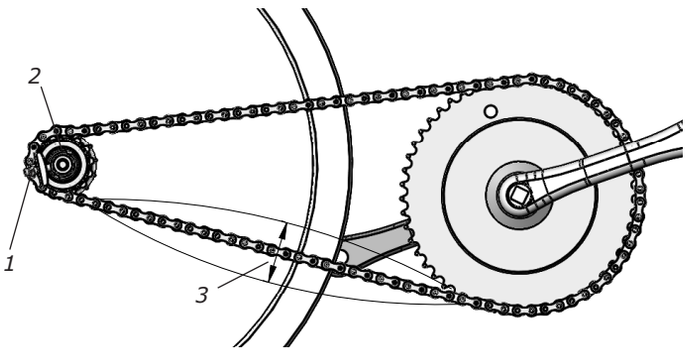


Fig: Chain adjustments
1) Chain adjuster
2) Hub nut
3) Chain play

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

To adjust or replace the chain remove frame covers if necessary.

To adjust the chain the hub nuts(2) should be loosened. Loosening or tightening the nuts on the chain adjusters(1) will then move the hub and axle forward or backward. Adjust according to above recommendation. Then tighten the nuts on the hub axle again. See *fig: Chain adjustments*.

To replace the chain, loosen the chain adjuster as much as possible. Dismantle the chain lock(6) and remove the chain. 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*.

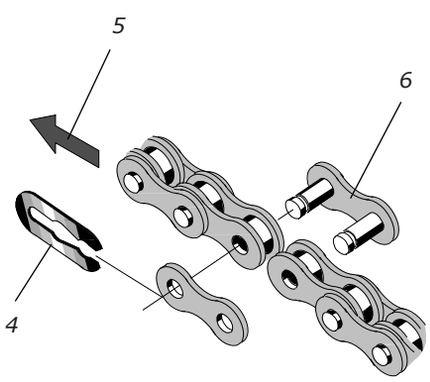


Fig: Chain replacement
4) Lock spring
5) Movement direction
6) Chain lock

NOTE: At assembly, the flywheel has to be parallel with the centerline of the frame otherwise the chain and chain wheels make a lot of noise and wear out rapidly.

Adjust chain adjusters to allow chain play according to above. Tighten hub nuts firmly. Replace frame covers.

Freewheel sprocket

When replacing the freewheel sprocket remove frame covers if necessary. Dismantle the chain as described in part ”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. Place the special remover (Art. No: 9100-14) in the adaptor and place the spacer and axle nut outside. See *fig: Special remover.* Replace sprocket-adaptor 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 adaptor-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: Lubrication

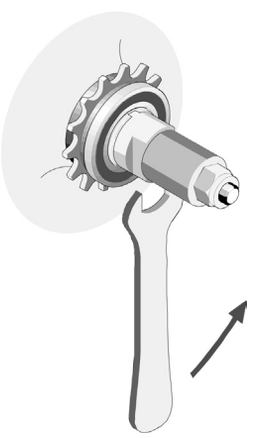


Fig: Special remover (Art. No: 9100-14)

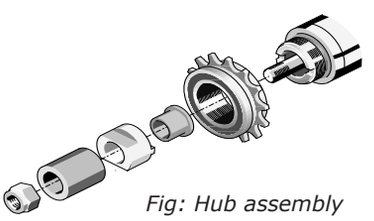
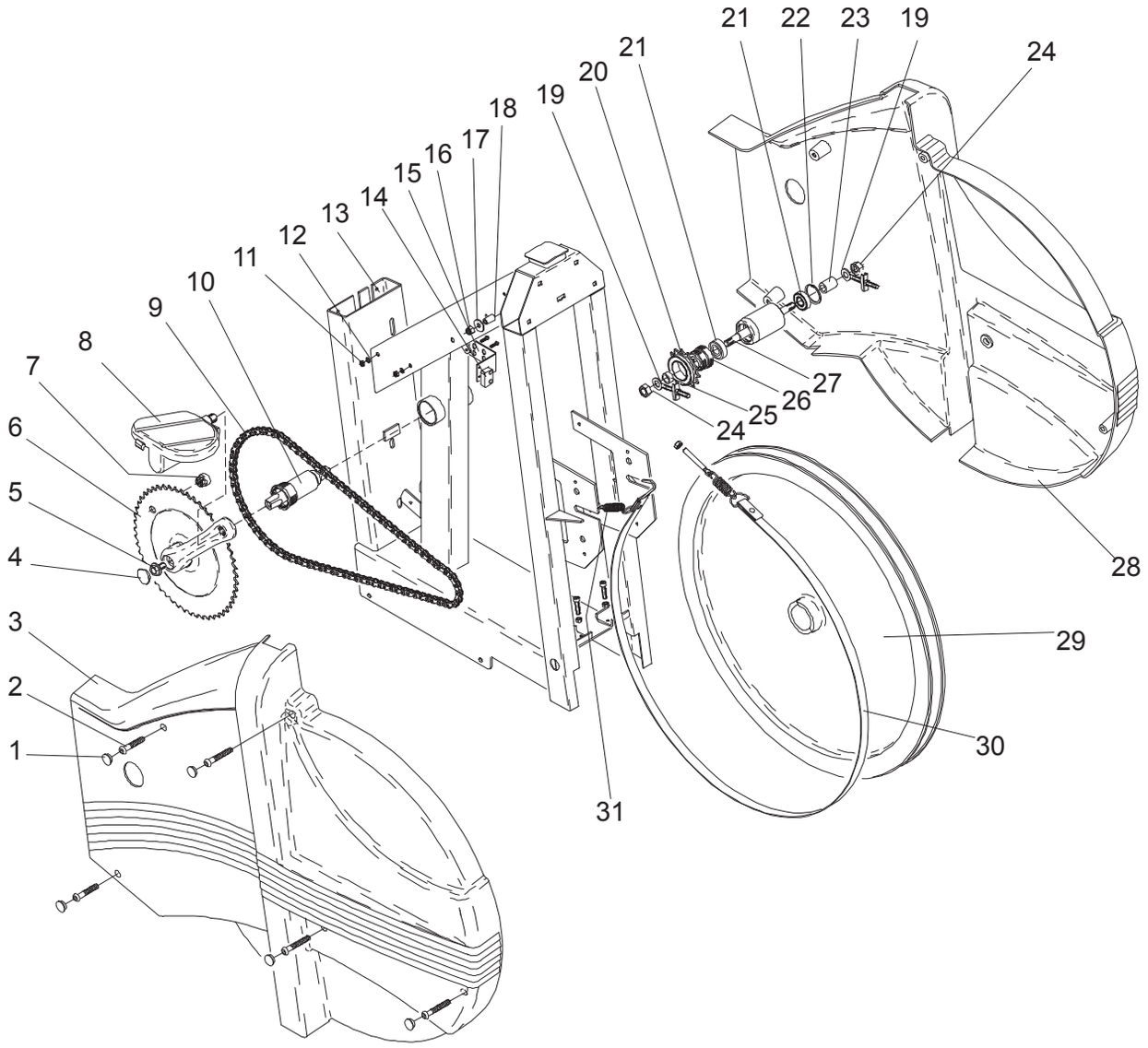
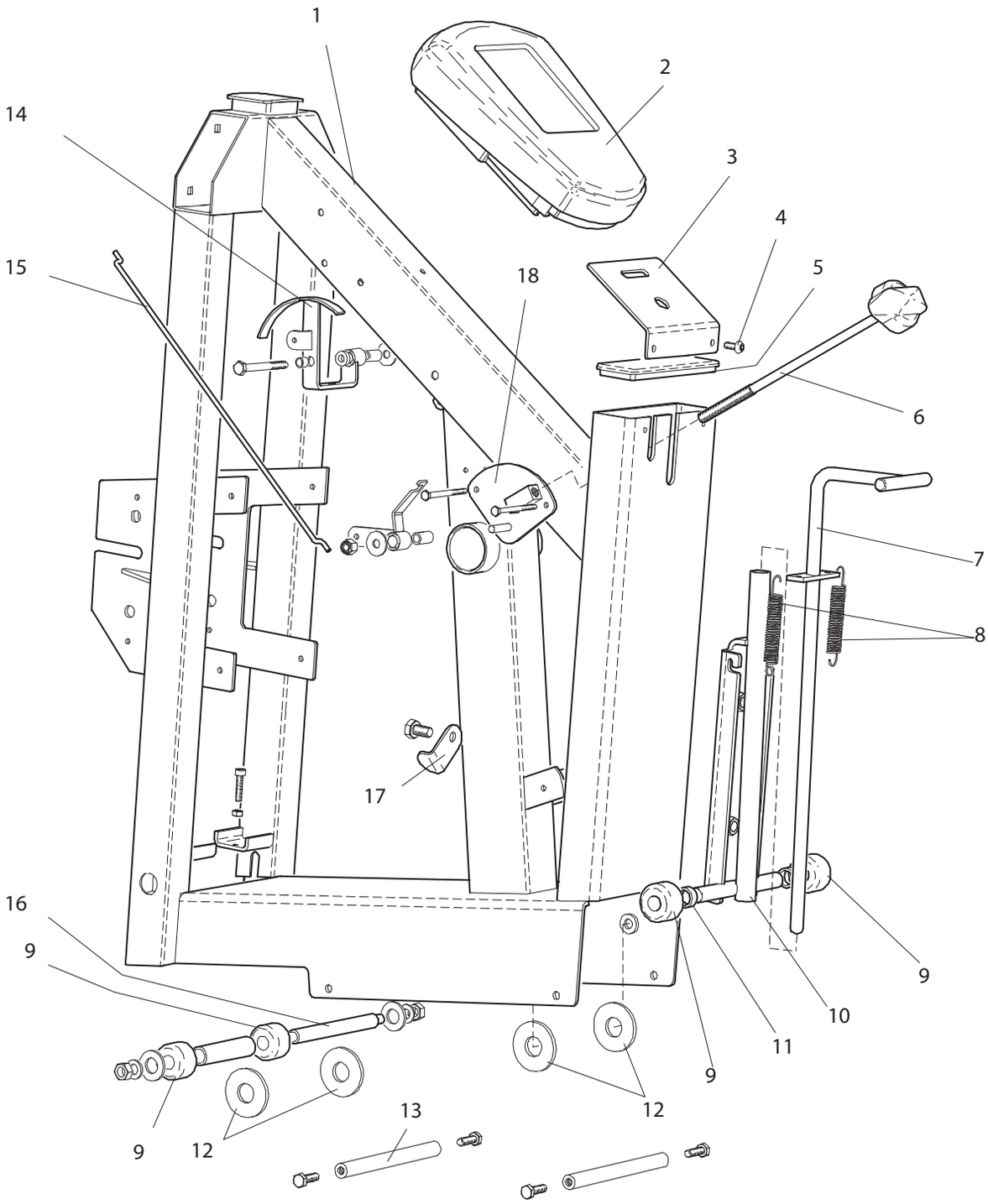


Fig: Hub assembly

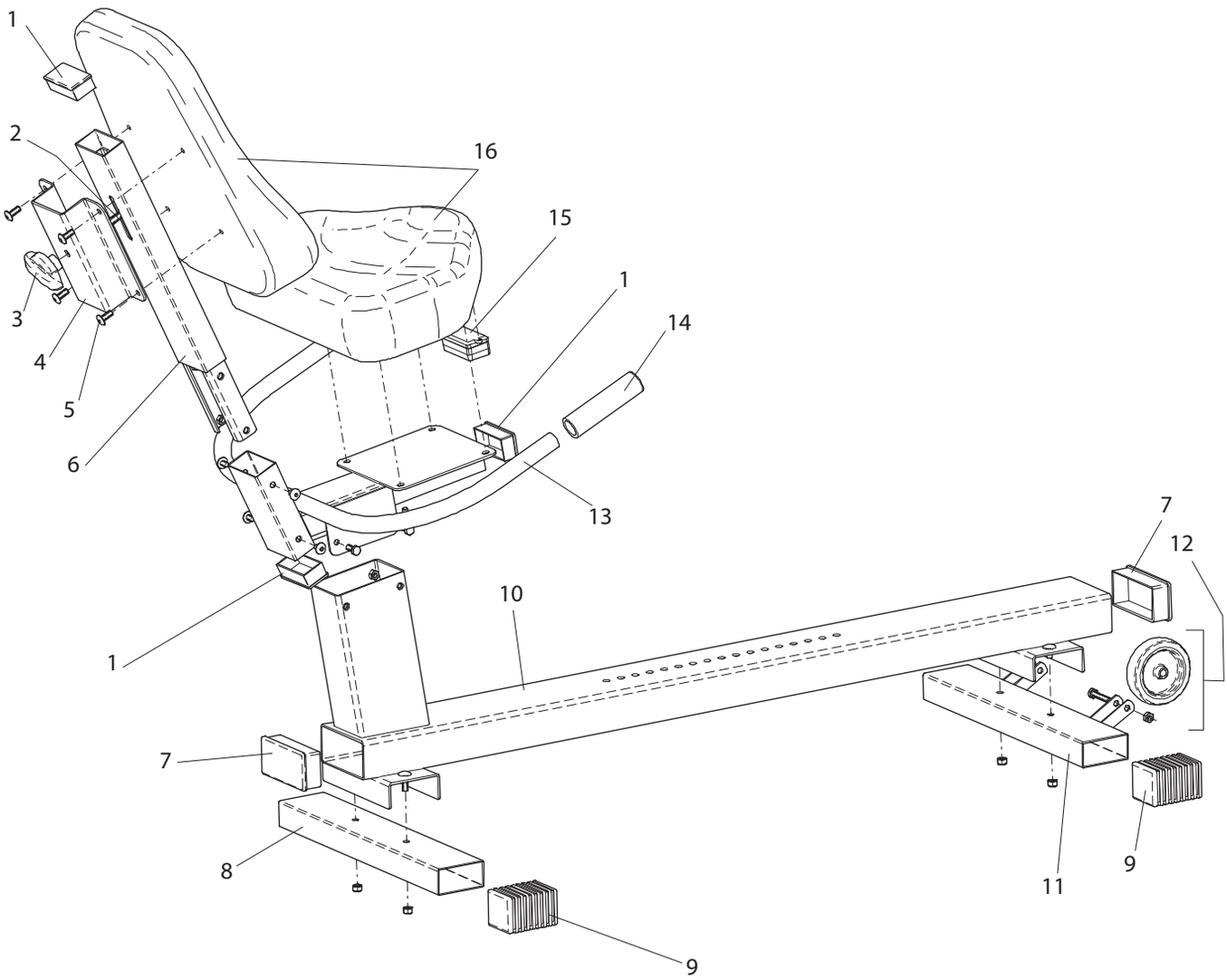
Spare parts



Pos.	Qty.	Art. No.	Description	Pos.	Qty.	Art. No.	Description
1	10	9306-12	Plastic cup	16	1	5842-9	Locking nut, M6
2	5	5673-9	Screw	17	1	5861-9	Washer
3	1	9337-51	Frame cover, right	18	1		Spacer 9 mm
4	2	8523-2	Dust cover	19	2	9000-112	Chain adjuster, pair
5	2	8523-115	Screw	20	1	9106-13	Sprocket, 14 t
6	1	9300-401	Crank set complete	21	2	19001-6	Bearing 6001-2z
7	1	9326-164	Magnet	22	1	9000-15	Låsring, SgH 23
8	1	9300-220	Pedal (pair)	23	1	9300-17	Spacer
	1	9300-207	Footstraps (pair)	24	2	5799	Nut
9	1	1079-88	Chain	25	1	9000-17	Spacer
10	1	8966-177	BB cartridge bearing	26	1	9106-14	Connection
11	2	5842-9	Nut	27	1	9300-18	Axle
12	2	5861-9	Washer, BRB5	28	1	9337-52	Frame cover, left
13	1	9337-3	Frame	29	1	9300-3	Flywheel, complete
14	1	9326-162	Sensor with cable	30	1	9337-35	Brake belt, complete
	1	9326-263	Extension cable	31	1	9306-31	Spring
15	1	9326-166	Sensor holder				



Pos.	Qty.	Art. No.	Description	Pos.	Qty.	Art. No.	Description
1	1	9337-3	Frame	11	2	9010-102	Self-locking cap
2	1	9337-180	Digital meter	12	4	9337-16	Washer
3	1	9337-7	Holder for digital meter	13	2	9337-24	Axle
4	2	9300-12	Screw	14	1	9337-31	Tension lever, complete
5	1	9337-22	Plastic cap	15	1	9337-12	Stay
6	1	9300-25	Locking screw, complete	16	1	9337-23	Axle
7	1	9337-13	Lever	17	1	9337-36	Washer
8	2	9100-20	Spring	18	1	9306-27	Tension plate
9	4	9337-15	Bearing		1	9337-550	Decalset
10	1	9337-4	Holder		1	9337-150	Screw, washer and nut set



Pos.	Qty.	Art. No.	Description	Pos.	Qty.	Art. No.	Description
1	3	9300-10	Plastic cap	9	4	9300-7	Plastic cap, blue
2	1	9337-8	Lock washer	10	1	9337-5	Frame
3	1	9337-122	Locking screw	11	1	9300-5	Support tube, front
4	1	9337-6	Backsupport	12	2	9000-29	Transport wheel, complete
5	1	9337-38	Screw	13	1	9337-1	Hand holder
6	1	9337-2	Saddle post	14	2	9337-181	Sensor handle
7	2	9337-21	Plastic cap	15	1	9337-182	Pulse transmitter
8	1	9300-6	Support tube, rear	16	1	4997-5	Saddle

Notes:

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MONARK
EXERCISE AB

Version 1010
Art. No: 7950-300

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