

**TRANSLATION OF THE ORIGINAL
OPERATING INSTRUCTIONS**

EPAC EN 15194

OPERATING INSTRUCTIONS

EN ISO 4210-2

RAYMON

E-bike/EPAC/EAPC Road/Gravel

IMPORTANT!

This manual includes three parts:

In the first part you find – short and crisp – the **substantial safety information** for your Raymon bicycle/Raymon bike or Raymon EPAC/EAPC/Raymon e-bike.

The second part describes the **special features of electric Raymon bicycles** (also referred to as EPAC/EAPC/e-bike). The focus in this part is on the electric side.

The third part includes **detailed information and tips on operating your Raymon bicycle and lots of interesting facts about bicycle technology, maintenance and care**. The focus in this part is on the mechanical side.

Read all parts of this manual thoroughly!

Before your first ride, read the respective chapters **“General Safety Instructions”**, **“Intended Use”** and **“Before Your First Ride”**!

Perform the functional check described in the respective chapter **“Before Every Ride”**!

Observe the maintenance intervals of the chapter **“Service and Maintenance Schedule”** in your extensive Raymon operating instructions.

The Raymon operating instructions system in digital form is available under the following link:

<https://media.raymon-bicycles.com/direct/vTQbnMWu6I>



Frame:

- ① Top tube
- ② Down tube
- ③ Seat tube
- ④ Rear stay
- ⑤ Chainstay
- ⑥ Head tube

- I Motor/drive unit
- II Rechargeable battery

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Frame:

- ① Top tube
- ② Down tube
- ③ Seat tube
- ④ Rear stay
- ⑤ Chainstay
- ⑥ Head tube

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In the industry, two categorisations/classifications of bicycles are common. One is the ASTM category F2043-13 and the other one the EN 17406:2021-11, which are partly contradictory. For this reason, both categories are mentioned in the relevant sections. For more information see the chapter **“Intended Use”**.

SUBSTANTIAL SAFETY INFORMATION FOR RAYMON BICYCLES AND ELECTRIC RAYMON BICYCLES

The safety information is integral part of your Raymon operating instructions system, in which all relevant information is described. This safety information does not replace the comprehensive Raymon manuals including detailed notes on handling, care and maintenance.

Use, checks and adjustments have to be carried out in accordance with the Raymon manuals.

The Raymon operating instructions system in digital form is available under the following link:

<https://media.raymon-bicycles.com/direct/VTQbnMWu6l>



If required, you can order the Raymon manuals in paper form free of charge from the following address:

R Raymon Bicycles GmbH
Rudolf-Diesel-Str. 35
97424 Schweinfurt – Germany
info@raymon-bicycles.com

In addition, you find there:

- the system instructions of the drive system manufacturer,
- the manuals of the component manufacturers, if available, and
- further manuals, e.g. for assembly and the appropriate use of accessories, if available.

Be sure to read this safety information carefully before you set off on your new Raymon bicycle or electric bicycle for the first time. Furthermore, read at least the chapters “**Intended Use**”, “**Before Your First Ride**” and “**Before Every Ride**” in your Raymon manuals.

The terms in bold are direct references to the respective chapters in your Raymon manuals.

Keep in mind that in the following bicycles are referred to as *bikes* and electric bicycles of the legal classification EPAC/EAPC are colloquially referred to as *e-bikes* for better reading flow.

WARNING

- **Reading this safety information does not release you from the obligation to read and observe the Raymon manuals!**
- **Non-observance of the Raymon manuals can lead to dangerous riding situations, falls, accidents with unforeseeable consequences and damage to property.**
- **Get in touch with your Raymon dealer if you are unable to carry out the described work on your Raymon bike or e-bike (e.g. making adjustments) on your own, if you feel unsure or if you do not have the suitable tools.**
- **Keep in mind that the Raymon manuals may require further explanation, depending on the experience and/or skills of the person doing the work. For some jobs you may require additional (special) tools or supplementary instructions. If you have the slightest doubt ask your Raymon dealer.**

GENERAL SAFETY INSTRUCTIONS

WARNING

Failure to observe the intended use can lead to component and material failure with the risk of accident and injury:

- Keep in mind that each Raymon bike or e-bike is built for a specific intended purpose, also referred to as category. Be sure to use your Raymon bike or e-bike only according to its intended use, as it may otherwise not withstand the stress, fail and cause an accident with unforeseeable consequences!
Observe the restrictions of the specified categories. You find detailed information on the categories in the chapter **"Intended Use"** and in the **Raymon bike card**. Ask your Raymon dealer to confirm the category to which your Raymon bike or e-bike belongs.
- Do not exceed the maximum permissible overall weight including the rider, the luggage, the Raymon bike or e-bike and the child seat or trailer load, if permitted.
The maximum permissible overall weight is specified on the type plate on your Raymon bike or e-bike or in the **Raymon bike card**. If you are in doubt, contact your Raymon dealer.
- Observe the legal regulations and the manufacturer's specifications as to the transportation of passengers and goods. You find them in the Raymon manuals and in the **Raymon bike card**.
- Check your Raymon bike or e-bike before every ride for possible damage, in particular on the frame, the fork, the handlebar/stem unit, the drive unit and the saddle/seat post, see the chapter **"Before Every Ride"**.

- Be sure to only use your Raymon bike or e-bike if you have not detected any malfunctions or damage during the checks described in the chapters **"Before Your First Ride"**, **"Before Every Ride"** or **"After an Accident"**.
- Observe the legal regulations and the manufacturer's specifications as to the installation of add-on parts (bags, lock, child seat, carrier systems etc.) and the usage of a trailer. You find them in the Raymon manuals and in the **Raymon bike card**.
- Observe the legal regulations applicable in the respective country for use on public roads. For more information see the chapter **"Legal Requirements for Riding on Public Roads"**.
- When transporting your Raymon bike or e-bike, observe the manufacturer's, the legislator's or the transport company's instructions. You find more information in the chapter **"Transporting the EPAC/EAPC"** or **"Bicycle Transport"**.

WARNING

Do not modify or manipulate ("tune") your Raymon e-bike. In addition to the imminent risk of accident, the liability for material defects and the warranty will expire.

For your own safety, do not overestimate your riding skills. Note that though looking easy the riding manoeuvres of a professional are hazardous to your life and limb. Always protect yourself with suitable clothing.

CAUTION

Be aware of the risk of injury due to potentially high temperatures of individual components (e.g. brakes, drive unit, headlights).

BEFORE YOUR FIRST RIDE

Before you set off for the first time on your new Raymon bike or e-bike, you should therefore read at least the chapters **"Intended Use"**, **"Before Your First Ride"**, **"Before Every Ride"** and **"Adjusting the Bicycle to the Rider"** in the Raymon manuals.

Before your first ride, check in particular the correct functioning and adjustment of:

- the brakes (chapter **"Brake System"**),
- the steering (chapter **"Headset"**),
- the saddle and the seat post (chapter **"Adjusting the Bicycle to the Rider"**),
- the gears (ch. **"Gears"**),
- the front and rear wheel (ch. **"Wheels and Tyre Equipment"**),
- suspension elements/chassis (if available) (ch. **"Suspension"**),
- the pedals (ch. **"Pedals and Shoes"**),
- the lighting (ch. **"Lighting"**),
- if available, control element and rechargeable battery (ch. **"Useful Tips for Riding an EPAC/EAPC"** and **"Safe Handling of the Rechargeable Battery"**).

BEFORE EVERY RIDE

For your own safety, carry out the following functional checks before every ride:

- quick-releases, thru axles and bolted connections (ch. **"How to Use Quick-Releases and Thru Axles"**),
- brake test in standing (ch. **"Brake System"**),
- lighting (ch. **"Lighting"**),
- if available, suspension fork, rear shock, suspension seat post (ch. **"Suspension"**),
- the tight fit of the handlebar, the stem, the saddle and the seat post (ch. **"Adjusting the Bicycle to the Rider"**),
- the tyre pressure and, whether the tyres are in sound condition (ch. **"Wheels and Tyre Equipment"**),
- is the kickstand, if available, fully folded in.

If you have a Raymon e-bike check in addition:

- the tight fit, the state of charge and the functioning of the rechargeable battery (ch. **"Safe Handling of the Rechargeable Battery"**),
- the values displayed on the control element (ch. **"Useful Tips for Riding an EPAC/EAPC"**).

NOTICE

Take a lock with you on your rides to prevent theft and avoid unauthorised use of your Raymon bike or e-bike.

AFTER AN ACCIDENT

After an accident, check that all functions and/or components are still working correctly and without damage.

Be sure to only ride back very carefully by taking the shortest route, if your Raymon bike or e-bike passed all checks without any faults. Do not accelerate or brake hard and do not ride out of the saddle. If you are in doubt about the performance of your Raymon bike or e-bike, have yourself picked up by car, instead of taking any risk.

You find detailed information on the behaviour after an accident in the chapter **"After an Accident"** in the Raymon manuals.

SAFE RIDING – RIDING BEHAVIOUR

First, make yourself familiar with the riding and braking behaviour as well as the electric assistance modes and the pushing aid (if available) in an area free of traffic, especially with different loads, in wet conditions and on loose ground.

Never ride without a properly adjusted helmet and without glasses and take care to always wear suitable, bright clothing. As a minimum you should wear straight cut trousers or use trouser clips and shoes fitting the pedal system. Always ride carefully on public roads and observe the traffic rules so as not to endanger yourself or others.

You find detailed information in the chapters **"Adjusting the Bicycle to the Rider"** and **"Useful Tips for Riding an EPAC/EAPC"**.

AFTER THE RIDE / MAINTENANCE

- In the event of damage or malfunctions, you have to have your Raymon bike or e-bike checked by your Raymon dealer before further use.
- Have your Raymon bike or e-bike regularly inspected and, if necessary, serviced by your Raymon dealer in order to avoid hazards, e.g. due to wear and tear. You find further information in the chapter **"Service and Maintenance Schedule"**. Or contact your Raymon dealer.
- Observe the specified torque values (Nm) for the assembly of components using a high-quality torque wrench. You find the torque values on the components themselves, in the chapter **"Recommended Torque Values"** or in the manuals of the component manufacturers. Alternatively, you find them in the download area on the websites of the respective component manufacturers.
- Be sure to only use rechargeable batteries and chargers approved by the manufacturer.
- Observe the manufacturer's instructions for charging and using the battery, in particular with regard to the ambient temperature and location of the charging process. Be sure to only use undamaged and unmodified rechargeable batteries and chargers. You find more information in the chapter **"Safe Handling of the Rechargeable Battery"** and in the system instructions of the drive system manufacturer.

WARNING

*Regular maintenance of your Raymon bike or e-bike is essential for its suitability and crucial for your safety. You as owner are the only one who knows how often you use your Raymon bike or e-bike, where you use it and how hard you do. It is therefore your responsibility, to have regular servicing and maintenance carried out. For more information see the chapter **"Service and Maintenance Schedule"**. Or contact your Raymon dealer.*

TRANSLATION OF THE ORIGINAL
OPERATING INSTRUCTIONS
EN 15194

RAYMON

E-bike/EPAC/EAPC

Pay particular attention to the following symbols:

⚠ WARNING

This symbol indicates a hazardous situation which could result in death or serious injury – if the relevant operational instructions are not followed or if the relevant protective measures are not taken.

⚠ CAUTION

This symbol indicates a hazardous situation which could result in minor or moderate injury – if the relevant operational instructions are not followed or if the relevant protective measures are not taken.

NOTICE

This symbol is used to address practices not related to physical injury – which may, however, result in damage to property and the environment.

SAFETY INSTRUCTIONS

This symbol indicates specific safety-related instructions or procedures about how to handle the product or refers to a section in the operating instructions that deserves your particular attention.

The described possible consequences will not be repeated in the translation of the Raymon original operating instructions for Raymon EPACs/EAPCs every time one of the symbols appears.

For the sake of better legibility, the male form is used with personal names and personal nouns throughout these Raymon original operating instructions. The terms in question principally apply to all genders in the spirit of equal treatment. The abbreviated language form is used solely for editorial reasons and does not represent any value judgement.

NOTES ON THE TRANSLATION OF THESE RAYMON ORIGINAL OPERATING INSTRUCTIONS

The illustrations show typical Raymon EPACs/EAPCs (c+d) – one of these types may look similar to the Raymon EPAC/EAPC you purchased. Today's EPACs/EAPCs come in various types that are designed for specific uses and equipped accordingly.

The translation of these Raymon original operating instructions is not applicable to any other than the displayed EPAC/EAPC types.

SAFETY INSTRUCTIONS

Read in any case the detailed, type-specific general Raymon bicycle user manual and the system instructions of the drive system manufacturer that you received from your Raymon dealer.

Also observe the enclosed manuals of the component manufacturers. The translation of these Raymon original operating instructions is subject to European law. If delivered to countries outside Europe, supplementary information has to be provided by the bicycle manufacturer.



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The translation of these Raymon original operating instructions is a supplementary manual as to the characteristics of EPACs/EAPCs. It is part of a system together with the drive system manufacturer's system instructions and the detailed, type-specific general Raymon bicycle user manual that you obtained with your Raymon EPAC/EAPC.

The translation of these supplementary instructions together with the additional manuals comply with the requirements of the EN ISO standards 4210-2, the EN 15194 Cycles – Electrically power assisted cycles – EPAC bicycles in the respective current version as well as with the Machinery Directive 2006/42/EC (UK: Supply of Machinery (Safety) Regulations 2008).

In the translation of these Raymon original operating instructions bicycles with drive support and described as EPACs in the European standards EN 15194 and EN 17404 are referred to as EPACs/EAPCs. For a precise description of the different EPAC/EAPC types see the chapter “**Intended Use**”.

The translation of these operating instructions is not intended to help you assemble a Raymon EPAC/EAPC from individual components, to repair it or to make a partly assembled EPAC/EAPC ready-for-use!

SAFETY INSTRUCTIONS

Keep the translation of these Raymon original operating instructions for future reference and hand it over to the respective user, in case you sell, lend or pass on the EPAC/EAPC otherwise.

Technical details in the text and illustrations of the translation of these Raymon original operating instructions are subject to change.

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GENERAL SAFETY INSTRUCTIONS

Dear Raymon Customer,

In purchasing this Raymon EPAC/EAPC (e-h) you have chosen a product of high quality and technology. Each component of your new Raymon EPAC/EAPC has been designed, manufactured and assembled with great care and expertise. Your Raymon dealer gave the Raymon EPAC/EAPC its final assembly and adjustment to guarantee proper operation and many enjoyable riding experiences with complete peace of mind from the very first metres enjoying the tailwind due to the auxiliary drive.

This manual contains a wealth of information on the proper use of your Raymon EPAC/EAPC, its maintenance and operation as well as interesting information on bicycle and EPAC/EAPC design and engineering. Read this manual thoroughly. We are sure that even if you have been cycling (bicycle or EPAC/EAPC) all your life you will find useful and detailed information. EPAC/EAPC technology has developed at a rapid pace during recent years. Therefore, before setting off on your new EPAC/EAPC, be sure to read at least chapter **"Before Your FIRST Ride"**.

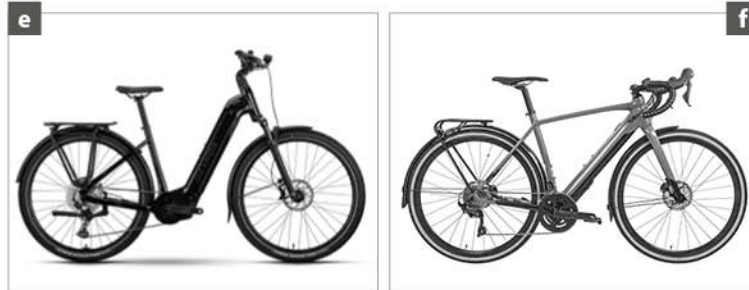
To have as much fun as possible during cycling, be sure to carry out the functional check described in chapter **"Before EVERY Ride"** before setting off.

Even a manual as big as an encyclopaedia could not describe any possible combination of EPAC/EAPC models and components or parts on the market. Therefore, these operating instructions together with the system instructions of the drive system manufacturer and your general Raymon bicycle user manual focus on your newly purchased Raymon EPAC/EAPC and standard components and provide useful information and warnings.

When doing any adjusting and servicing, be aware that the detailed instructions provided in your manual only refer to this Raymon EPAC/EAPC.

The information included here is not applicable to any other EPAC/EAPC or EPAC/EAPC type. As bicycles and EPACs/EAPCs come in a wide variety of designs with frequent model changes, the routines described may require complementary information. Be sure to also observe the instructions of the component suppliers that you may have obtained from your Raymon dealer.

Be aware that these instructions may require further explanation, depending on the experience and/or skills of the person doing the work. For some jobs you may require additional (special) tools or supplementary instructions. This manual cannot teach you the skills of a bicycle mechanic. If you have the slightest doubt ask your Raymon dealer.



E-BIKE/EPAC/EAPC



Before you set off, let us point out a few things to you that are very important to every cyclist. Never ride without a properly adjusted helmet and without glasses (a) and take care to always wear suitable, bright clothing. As a minimum you should wear straight cut trousers or use trouser clips and shoes (b) fitting the pedal system. Always ride carefully on public roads and observe the traffic rules so as not to endanger yourself or others.

This manual cannot teach you how to ride the EPAC/EAPC. Be aware that riding an EPAC/EAPC is a potentially dangerous activity, especially on public roads that requires the rider to stay in control of his or her EPAC/EAPC at all times. Be aware from the moment you set off that you ride at a higher speed. Always keep this fact in mind and ride considerably!

Like any sport, riding an EPAC/EAPC involves the risk of injury and damage. When you set off on an EPAC/EAPC you should be aware and accept this risk. Please note that on an EPAC/EAPC you have no safety devices around you (e.g. bodywork, ABS, airbag) like you have in a car. Therefore, always ride carefully and respect the other traffic participants. Never ride under the influence of drugs, medication, alcohol or when you are tired. Do not ride with a second person on your EPAC/EAPC and never ride without having both hands on the handlebar.

Observe the legal regulations concerning cycling with EPACs/EAPCs off public roads (c). These regulations may differ in each country.

Respect nature when riding through the forest and in the open countryside. Only use your Raymon EPAC/EAPC on signposted, well maintained trails and hard-surface roads.

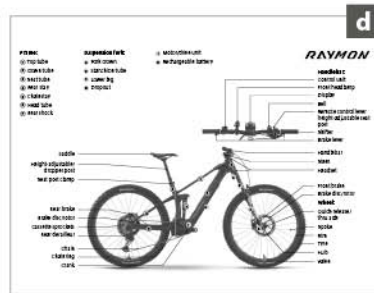
Always bear in mind that you travel rapidly and quietly. Do not startle pedestrians or other cyclists. Always make others aware of your presence well ahead of time and by ringing your bell or make use of the brakes so as to avoid accidents. Familiarise yourself with your Raymon EPAC/EAPC.

First we would like to familiarise you with the components of your Raymon EPAC/EAPC. Unfold the cover of these Raymon original operating instructions. There you will find an exemplary Raymon EPAC/EAPC showing all the essential components (d).

⚠ WARNING

For your own safety, never do any maintenance work or adjusting on your EPAC/EAPC unless you feel absolutely sure about it. If you are in doubt or if you have any questions, contact your Raymon dealer.

Note: Do not hitch yourself and your bike to a car. Do not ride free-hand. Only take your feet off the pedals, if required by the condition of the road. Also bear in mind that riding with headphones is in some countries allowed as long as the acoustic perception is not impaired. Inform yourself about the law situation in the country where you use your EPAC/EAPC.



Displays of Different Manufacturers

- | | |
|----------------------------|--------------------|
| 1 Level/mode of assistance | 5 Gear |
| 2 State of charge | 6 Time |
| 3 Current speed | 7 Total kilometres |
| 4 Average speed | |



There are now nearly all types of bicycles also available as electric bicycles. The types of bicycles are subdivided in the following categories:

- Category 1:** e-city, e-fitness bicycles
- Category 2 "Everyday":** e-trekking, e-touring, e-cross, e-youth bicycles
- Category 2 "Sports":** e-gravel bikes
- Category 3:** e-cross-country, e-marathon, e-touring mountain bikes
- Category 4:** e-enduro, e-all mountain bikes (d), e-trail bikes
- Category 5:** e-downhill, e-freeride mountain bikes
- Category 6:** e-road racing bicycles

It is imperative that you read chapters "Intended Use" and "Before Your First Ride" of your general Raymon bicycle user manual. There you will find detailed information on the use of the bicycles of the respective category.

The starting or pushing aid (e) provides assistance during pushing (f) or when doing a hill start, even without pedalling, up to a speed of 6 km/h (3.7 mph). Be sure to also read chapter "Riding an Electric Carrier Cycle – Special Features".



⚠ WARNING

Do not modify or manipulate ("tune") your Raymon EPAC/EAPC. Risk of accident! Modifications and manipulations (e.g. dongles etc.) will render the warranty void and result in a loss of the private liability insurance cover. The EPACs/EAPCs are then possibly no longer approved for use on public roads (scope of the Road Traffic Licensing Regulation) and on forest trails.

NOTICE

We recommend that you take out private liability insurance. Make sure that coverage for damage caused during cycling by bicycle or EPAC/EAPC is provided by your insurance. Contact your insurance company or agency.

SAFETY INSTRUCTIONS

The regulations and rules for EPACs/EAPCs and speed pedelecs are continuously revised. Read the daily press to keep you informed about current legislative changes.

For more information on the approval of using trailers (g) and child seats (h) with your Raymon EPAC/EAPC have a look at the Raymon bike card.

2. **Speed pedelecs** (a) are bicycles with an auxiliary motor which provides assistance to the rider even beyond a speed of 25 km/h to max. 45 km/h (15.5 mph to max. 28 mph), as long as you continue pedalling. Without pedalling a speed pedelec provides assistance to a maximum speed of 20 km/h (12.4 mph). In the UK EPACs/EAPCs that can be propelled without pedalling, i.e. by a throttle alone, are also referred to as 'twist and gos'. They require type approval (if bought as of January 2016).

The legal regulations for riding a speed pedelec with regard to driving licence, registration, type approval, requirement to wear a helmet (b), insurance, regulations on the use of cycle lanes etc. are listed in the **"Overview on EPACs/EAPCs, Speed Pedelecs and 'Twist and Gos' – Legal Regulations in Great Britain"** at the end of this chapter. Speed pedelecs are considered motor vehicles and therefore subject to strict regulations relating to the replacement of component and to changes.

One-way streets with signs stating it is permitted for cyclists to ride the wrong way down are not open for speed pedelec riders. Roads which are closed for motor vehicles, motor cycles and mopeds, must neither be used by speed pedelecs.

When you ride a speed pedelec in **Great Britain**, wearing a motorcycle helmet is compulsory.

Most of the speed pedelecs are designed for cycling exclusively on lanes and roads with a smooth surface. Only use trails and tracks that are open to speed pedelecs. Typical speed pedelecs are in general not suitable for off-road use. Using typical speed pedelecs off-road can result in crashes with unforeseeable consequences.

There are now many types of bicycles among the electric speed bicycles belonging to different categories. It is imperative that you read chapters **"Intended Use"** and **"Before Your First Ride"** of your general Raymon bicycle user manual. There you will find detailed information on the use of the bicycles of the respective category.

⚠ WARNING

Do not modify or manipulate ("tune") your speed pedelec. Risk of accident! Modifications and manipulations will render the warranty void and result in a loss of the private liability insurance cover. The speed pedelecs are then possibly no longer approved for use on public roads.

SAFETY INSTRUCTIONS

The regulations and rules for EPACs/EAPCs and speed pedelecs are continuously revised. Read the daily press to keep you informed about current legislative changes.



Overview on EPACs/EAPCs, Speed Pedelecs and 'Twist and Gos' – Legal Regulations in Great Britain¹

	EPAC/EAPC (also with pushing aid)	Speed pedelec	'Twist and go' EAPC
Pedal assistance up to max. km/h (mph)	25 km/h (15.5 mph) MDS ² without pedal assistance 6 km/h (3.7 mph)	45 km/h / 28 mph (with pedalling) 20 km/h / 12.4 mph (without pedalling) MDS ²	Propulsion without pedalling, with throttle
Helmet	recommended	compulsory (motorcycle helmet) ³	compulsory (motorcycle helmet) ³
Rear-view mirror	no	yes (c)	yes (c)
Horn	no	yes	yes
Driving licence	no	yes (cat. AM)	yes (cat. AM)
Registration or type approval	no, however UKCA mark and UKNI mark (North Ireland) and/or CE mark (until 2024/12) ⁴	yes, tax disc, number plate, MOT certificate	yes, tax disc, number plate, MOT certificate
Insurance	no	yes	yes
Riding on cycle lanes permitted	in town: yes out of town: yes	in town: no out of town: no	in town: no out of town: no
Riding on forest trails	yes	no	no
Vehicle class	bicycle	moped	moped
Legal age	14 years	16 years	16 years
Child seat	yes ⁵	forbidden (d)	forbidden (d)
Child trailer	yes ⁵	forbidden	forbidden

¹ In accordance with www.gov.uk/electric-bike-rules

The regulations and rules are continuously revised. Read the daily press to keep you informed about current legislative changes.

² MDS – maximum design speed

³ All helmets worn must meet either the British Standard BS 6658:1985 and carry the BSI Kitemark or the UNECE Regulation 22.05

⁴ UKCA (UK conformity assessed) plus UKNI where North Ireland is involved, see www.gov.uk/guidance/using-the-ukca-marking

⁵ For many bike models this legal authorisation is restricted. Observe the Raymon bike card.

Last update 2024/01

WARNING

Tuning, i.e. improvement in performance and speed, is not a trivial offence, but has far-reaching consequences ranging from loss of insurance cover, prohibition of use on public roads and paths, to possible material failure due to overload.

1. Have you ever ridden an EPAC/EAPC? Note the particular riding characteristics of this revolutionary hybrid drive concept (a+b). Set off for your first ride by selecting the lowest level of drive assistance. Slowly approach the potential of your Raymon EPAC/EAPC in an area free of traffic.

For more information in this regard, read chapter “**Useful Tips for Riding an EPAC/EAPC**”.

2. Your Raymon EPAC/EAPC is designed for a **maximum permissible overall weight** including the rider, the luggage, the Raymon EPAC/EAPC and the child seat or trailer load, if permitted. The maximum permissible overall weight is specified on the type plate on the Raymon EPAC/EAPC or in the Raymon bike card (c) in these operating instructions. If you are in doubt, contact your Raymon dealer.

Do not hang any bags or other heavy or big objects (such as umbrellas) to the handlebar of your Raymon EPAC/EAPC. Risk of accident!



Strictly observe the category to which your Raymon bicycle/EPAC/EAPC belongs. From the category you can conclude which grounds and riding actions are suitable for your bicycle. You find the categories in chapter "Intended Use" as well as in the same chapter in your detailed, general Raymon bicycle user manual as well as in the Raymon bike card.

Do not wear long skirts, flared trousers or ponchos and do not hang long strings, bands or the like to your Raymon EPAC/EAPC during the ride. There is the risk of getting caught in the wheels or in the drive. Risk of accident!

The weight or the weight distribution on EPACs/EAPCs differs significantly from that on bicycles without drive system. An EPAC/EAPC is clearly heavier than a bicycle without drive assistance. For this reason parking, pushing, lifting and carrying the EPAC/EAPC is more difficult. Bear this in mind when loading your Raymon EPAC/EAPC into a car and unloading it or when mounting it on a bicycle carrier system (d).

The A-weighted emission sound pressure level at the rider's ears is less than 70 dB(A).

3. If you want to use your Raymon EPAC/EAPC on public roads, it has to comply with the respective legal requirements, in particular as regards the lighting. These requirements may vary in each country. The equipment of your Raymon EPAC/EAPC is therefore not necessarily complete. Ask your Raymon dealer for the laws and regulations applicable in your country or in the country you intend to use the Raymon EPAC/EAPC. Have your Raymon EPAC/EAPC equipped accordingly, before using it on public roads (e).
4. The rechargeable battery of your Raymon EPAC/EAPC must be charged before you set off for the first time (f). Are you familiar with the handling and mounting of the rechargeable battery? Before you set off for the first time, check whether the battery is properly mounted, that it has engaged audibly and that it is locked.

You find more information in the system instructions of the drive system manufacturer. If you are not absolutely sure about the manufacturer of your drive system, contact your Raymon dealer.

⚠ WARNING

- **We recommend that you charge your battery during the day and only in dry rooms which have a smoke or a fire detector; but keep it off your bedroom. Place the battery during the charging process on a big, non-inflammable plate made of ceramics or glass!**
- **Charge your battery with the supplied charger only. Do not use the charger of any other manufacturer, not even when the connector of the charger matches your rechargeable battery. The rechargeable battery can heat up, catch fire or even explode!**
- **Do not charge and park the Raymon EPAC/EAPC in the blazing sun. Temperatures above 40 °C (104 °F) may result in a failure of the battery.**

SAFETY INSTRUCTIONS

- **Note that the rechargeable battery switches into the sleep mode after a few days of non-use. If you want to know how to awake the battery, you find more information in the system instructions of the drive system manufacturer. If you are not absolutely sure about the manufacturer of your drive system, contact your Raymon dealer.**



5. The functions of your Raymon EPAC/EAPC are operated with the buttons on the control element at the handlebar (g+h, p. 11).

Are you familiar with all functions and displays? Check whether you know the functions of all buttons (a).

You find more information in the system instructions of the drive system manufacturer. If you are not absolutely sure about the manufacturer of your drive system, contact your Raymon dealer.

6. Are you familiar with the brake system? Have a look at the Raymon bike card and check whether you can actuate the front brake with the same brake lever or brake lever/shifter (right or left) you are used to. If it is not, have it modified by your Raymon dealer before you set off for the first time! Make sure that the lever-to-brake assignment is the same across all your bikes.

Your new Raymon EPAC/EAPC is equipped with modern brakes (b) which may be far more powerful than those you were used to so far. Be sure to first practise using the brakes on a level, non-slip surface off public roads! If you have an e-mountain bike also practise on loose ground.

Slowly approach higher brake performances and speeds. For more information see chapter **"Brake System"** of your general Raymon bicycle user manual and the enclosed operating instructions.

⚠ WARNING

- **The brakes of your Raymon EPAC/EAPC are always more effective than the drive system. If you have problems with your drive (e.g. because it pushes you forward in front of a bend), stop pedalling and actuate both brakes of your Raymon EPAC/EAPC carefully.**
 - **Pull the brake lever or brake lever/shifter of the rear brake and stop pedalling. The Raymon EPAC/EAPC stops. Emergency stop/ Emergency switching off! With a front motor, however, the front brake must be actuated carefully. The shortest possible stopping distance is achieved by braking with both brakes simultaneously and gradually.**
7. Are you familiar with the type and functioning of the gears (c+d)? Ask your Raymon dealer to explain the gear system to you and make yourself familiar with your new gears in an area free of traffic, if necessary. For more information see chapter **"Gears"** of your general Raymon bicycle user manual and the enclosed operating instructions.



8. Are both saddle and handlebar properly adjusted? The saddle should be set to a height from which you can just reach the pedal in its lowest position with your heel. Check whether your toes reach to the floor when you are sitting on the saddle.

Your Raymon dealer will be pleased to help you, if you are not happy with your seating position. For more information see chapter **"Adjusting the Bicycle to the Rider"** of your general Raymon bicycle user manual.

9. If your Raymon EPAC/EAPC is equipped with clipless or step-in (e) pedals: Have you ever tried cycling with the respective cycling shoes? Do not set off until you have practised engaging and disengaging the shoes from the pedals in standing. Ask your Raymon dealer to explain the pedals to you. For more information see chapter **"Pedals and Shoes"** of your general Raymon bicycle user manual and the enclosed operating instructions.
10. If you bought a Raymon EPAC/EAPC with suspension (f+g), you should ask your Raymon dealer to carry out the proper adjustment of the chassis. Improperly adjusted suspension forks or suspension elements can result in malfunction or damage to the suspension elements. In any case they will impair the performance of your Raymon EPAC/EAPC as well as your safety and joy whilst cycling.

For more information see chapters **"Suspension Forks"**, **"Rear Shock"** and **"Suspension Seat Posts"** of your general Raymon bicycle user manual. Further instructions regarding suspension forks are possibly enclosed with these operating instructions.

11. Are parts of your Raymon EPAC/EAPC made of carbon? Note that this material requires special care and must be used carefully. Read in any case the chapter **"Carbon – Important Information"** in your general Raymon bicycle user manual.

⚠ WARNING

- *When mounting your Raymon EPAC/EAPC, make sure not to step in the pedals until you sit in the saddle and grip the handlebar tight and that one pedal is at the lowest position when you get on. The motor assistance might switch on suddenly and result in an uncontrolled start of your Raymon EPAC/EAPC. Risk of accident!*
- *Be aware that the distance you need to stop your Raymon EPAC/EAPC may increase, when you are riding with your hands on bar ends or multi position handlebars. The brake levers are not in all gripping positions within easy reach.*
- *Note that both braking effect and tyre grip can be reduced drastically in wet conditions. Look well ahead when riding on wet roads and on loose ground and ride clearly slower than you would in dry conditions.*



2. Is the battery tight in its holder (e) and properly locked up (f)? Never set off with a loose and unlocked battery.

You find more information in the system instructions of the drive system manufacturer. If you are not absolutely sure about the manufacturer of your drive system, contact your Raymon dealer.

3. Does the display on the control element and the cycle computer on the handlebar show all values (g+h)? Is there any error message or warning on the display? Check the values are correct before every ride. Do not set off on your Raymon EPAC/EAPC when the control element shows a warning.

You find more information in the system instructions of the drive system manufacturer. If you are not absolutely sure about the manufacturer of your drive system, contact your Raymon dealer.

4. Are the connections of the rechargeable battery, the control element on the handlebar and the drive (a+b, p. 16) properly plugged?

You find more information in the system instructions of the drive system manufacturer. If you are not absolutely sure about the manufacturer of your drive system, contact your Raymon dealer.

5. Is your battery fully charged? Remember to fully recharge the battery after each longer ride (e.g. less than 50 % charged). Modern lithium-ion batteries have no memory effect. However, it does not matter if your Raymon EPAC/EAPC is left as it is for a short time (e.g. overnight) when less than 50 % charged. However, you should not wait until the battery is fully discharged!

You find more information in the system instructions of the drive system manufacturer. If you are not absolutely sure about the manufacturer of your drive system, contact your Raymon dealer.



6. Are the tyres in good condition and do they have sufficient pressure (c)? Note that an EPAC/EAPC weighs heavier and that your usual tyre pressure may be insufficient. A higher pressure gives a better riding stability and reduces the risk of a puncture. The minimum and maximum pressure (in bar or psi) is indicated on the tyre side.

For more information see chapter **“Wheels and Tyre Equipment”** of your general Raymon bicycle user manual and the enclosed operating instructions.

7. Spin the wheels to check whether the rims are true. If you have disc brakes, watch the gap between frame and rim or tyre and, if you have rim brakes, between brake pad and rim. Untrue rims can be an indication of tyres with ruptured sides or broken axles or spokes.

For more information see chapter **“Wheels and Tyre Equipment”** of your general Raymon bicycle user manual and the enclosed operating instructions.

8. Test the brakes as the bicycle is standing by firmly pulling the brake levers or brake levers/shifters towards the handlebar (d). Make sure you cannot pull the brake levers all the way to the handlebar. If your bicycle has hydraulic brakes, check the hydraulic brake cables for oil or brake fluid leaks! Also check the thickness of the brake pads.

With disc brakes you should have a stable pressure point at once. If you have to actuate the brake lever more than once to get a positive braking response, have the Raymon EPAC/EAPC checked by your Raymon dealer.

The brake pads of rim brakes must hit the rim evenly with their entire surface without touching the tyre during braking, in open condition or in between.

For more information see chapter **“Brake System”** of your general Raymon bicycle user manual and the enclosed operating instructions.

9. Let your Raymon EPAC/EAPC bounce on the ground from a small height. If there is any rattling, check where it comes from. Check the bearings, the bolts and the proper seat of the battery, if necessary.



10. If you want to ride on public roads, make sure your Raymon EPAC/EAPC is equipped according to the regulations of your country (e). Riding without lights and reflectors in dark or dim conditions is very dangerous because you will be seen too late or not at all by other road users.

A permissible lighting system is a must on public roads. Turn on the lights as soon as dusk sets in.

For more information see chapter “**Legal Requirements for Riding on Public Roads**” of your general Raymon bicycle user manual.

11. If your Raymon EPAC/EAPC has suspension (f), check it as follows: Press down on your Raymon EPAC/EAPC and see whether the spring elements retract and extend as usual.

For more information see chapters “**Suspension Forks**”, “**Rear Shock**” and “**Suspension Seat Posts**” of your general Raymon bicycle user manual as well as the enclosed operating instructions.

12. If your bike has a kickstand, make sure it is fully raised before you set off. **Risk of accident!**
13. Do not forget to take a high-value folding, D- (g) or chain lock with you on your ride. The only way to effectively protect your EPAC/EAPC against theft is to lock it to an immovable object.



⚠ WARNING

- **Improperly closed quick-releases (h) and other fastenings can cause components to come loose and result in serious accidents!**
- **Do not use your Raymon EPAC/EAPC, if it fails on one of these points! Riding a defective Raymon EPAC/EAPC can result in serious accidents! If you are in doubt or if you have any questions, contact your Raymon dealer.**
- **The drive is free of vibrations. During use your Raymon EPAC/EAPC is undergoing stress resulting from the surface of the road and through the rider's action. Due to these dynamic loads, the different parts of the Raymon EPAC/EAPC react with wear and fatigue. Please check your Raymon EPAC/EAPC regularly for wear marks, scratches, deformations, colour changes and any indication of cracking. Components which have reached the end of their service life may fail suddenly without previous warning. Let your Raymon dealer maintain and service your Raymon EPAC/EAPC regularly and in cases of doubt it is always best to replace components.**

NOTICE

- **Remove, if possible, the display when parking the Raymon EPAC/EAPC. This is to protect the Raymon EPAC/EAPC against theft; in addition, it cannot be used with drive assistance ad hoc.**

USEFUL TIPS FOR RIDING AN EPAC/EAPC

Your Raymon EPAC/EAPC is designed to be used like a conventional bicycle. The unique riding experience, however, starts when you actuate the drive system (a). At that moment the assistance generated by the powerful motor/drive unit increases with its high torque the stronger you pedal.

Set off for your first ride by selecting the lowest level of drive assistance. Gradually get used to the additional propulsion. Slowly approach the potential of your Raymon EPAC/EAPC in an area free of traffic. Practise typical riding situations such as starting off and braking, tight corners and riding on narrow cycle paths and lanes. This is where an EPAC/EAPC clearly differs from a conventional bicycle.

⚠ WARNING

The brakes of your Raymon EPAC/EAPC are always more effective than the drive system. If you have problems with your drive (e.g. because it pushes you forward in front of a bend), stop pedalling and actuate both brakes of your Raymon EPAC/EAPC carefully.

Pull the brake lever or brake lever/shifter of the rear brake and stop pedalling. The Raymon EPAC/EAPC stops. Emergency stop/Emergency switching off! With a front motor, however, the front brake must be actuated carefully. The shortest possible stopping distance is achieved by braking with both brakes simultaneously and gradually.



Riding with Drive Assistance

The system is switched on and off at the buttons of the control element on the battery (b) or on the handlebar (c). Furthermore, different assistance modes can be selected, the remaining capacity of the rechargeable battery is displayed and different functions of the cycle computer (d) can be selected, if necessary.

When switched on, the system activates during pedalling and the drive assistance is available. Sensors measure your pedalling movements and control the fully automated drive assistance according to the selected assistance mode. The level of the additional propulsion depends on the assistance mode, your speed and, as applicable, the amount of force applied to the pedals.

The assistance switches off when you reach a speed of more than 25 km/h (15.5 mph).

Keep in mind that you may have to change your riding habits:

Do not mount by placing one foot on the pedal and by trying to throw the other leg over the saddle. The Raymon EPAC/EAPC would set off suddenly. **Risk of accident!**

Stop pedalling earlier than you are used to before riding a turn or bend. Otherwise there may be too much propulsion and your cornering speed may be too high.

Do not give in to the temptation to always ride in a high gear, due to the powerful motor/drive unit. Shift gears frequently (e) in the same way that you are used to doing with a conventional bicycle so as to make your own contribution to your forward progress as efficient as possible. Your cadence should always be in a smooth flow. In other words, you should pedal at more than 60 crank rotations per minute. Shift down before stopping.

Keep in mind that the other road users are not yet used to EPACs/EAPCs and their higher speeds. Ride with this fact in mind and anticipate the actions of other road users. Be aware that the speed you ride at will be clearly faster than you are used to. Therefore, keep these facts in mind and be ready to brake whenever an unclear or a possibly dangerous situation comes into your field of vision.

⚠ WARNING

Do a test ride in an unfrequented area (f) to make yourself familiar with the riding characteristics of your Raymon EPAC/EAPC and the possibly higher speed and acceleration, before riding on public roads. Risk of accident! Never ride without a helmet!



⚠ WARNING

When getting on your Raymon EPAC/EAPC make sure not to step in the pedals until you sit in the saddle and have a firm grip on the handlebars or that the pedal is at its lowest point when getting on. The motor assistance may switch on unexpectedly and result in an uncontrolled start of your Raymon EPAC/EAPC. Risk of accident!

Keep in mind that due to the higher driving power at the rear wheel and in particular in the case of the much less frequently used front wheel motors (g) the risk of an accident increases with slippery roads (due to wetness, snow, gravel etc.). This applies all the more when riding bends. Risk of accident!

Note that car drivers and other road users may underestimate your speed. Always wear bright clothing. Therefore, always ride on public roads with this fact in mind and anticipate the actions of other road users. Risk of accident!

Keep in mind that pedestrians do not hear you when you approach at high speed. Therefore, ride particularly defensive and anticipating when using cycle lanes and cycle/footpaths to avoid accidents. If necessary, ring the bell to warn others (h).

Range – Useful Information for a Long Ride

How long and how far you can benefit from the auxiliary drive depends on several factors, i.e. the road conditions, the weight of the rider and any additional load, the rider's pedal force, the degree or mode of assistance, (head)winds, frequent stops, temperature, weather conditions, topography, tyre pressure etc.

The charge state of your rechargeable battery can be read from the display of the control element on the handlebar (a+b) or, additionally, on the rechargeable battery (c).

You find more information in the system instructions of the drive system manufacturer. If you are not absolutely sure about the manufacturer of your drive system, contact your Raymon dealer.

To extend the range it is recommended that you ride with low or no assistance at all on level or downhill trails and only select maximum drive assistance with headwinds, heavy additional loads and/or when climbing hills.

Furthermore, you can extend the range by

- checking the tyre pressure regularly, i.e. once a week with pressure gauge (d), and changing it, if necessary
- shifting gears down in front of traffic lights and intersections or in general in cases of stops and by setting off in low gears

- changing gears regularly, as you are used to on a bicycle without drive, i.e. by not only riding in high gears
- riding with these facts in mind and always looking ahead to avoid any unnecessary stops
- reducing your additional load, i.e. without unnecessary luggage
- storing your battery in your home and installing it only shortly before you set off on your Raymon EPAC/EAPC in cooler weather, in particular when it is cold
- not parking the Raymon EPAC/EAPC in the blazing sun

Some EPACs/EAPCs offer the possibility to switch downhill into the recuperation mode for energy recuperation. For more information on whether your Raymon EPAC/EAPC has the possibility of energy recuperation, read the system instructions of the drive system manufacturer.

If your battery has not enough capacity to reach your destination, benefit from the decisive advantage of the hybrid concept of your Raymon EPAC/EAPC: Without drive assistance you can ride your Raymon EPAC/EAPC like a conventional bicycle with an unlimited range and nearly without compromising on riding characteristics.



⚠ WARNING

If your rechargeable battery runs empty during the ride, be sure to charge it only with the supplied charger (e). Do not use the charger of any other manufacturer, not even when the connector of the charger matches your rechargeable battery. The rechargeable battery can heat up, catch fire or even explode!

NOTICE

The batteries of Raymon EPACs/EAPCs have no memory effect. It is recommended that you charge the battery after every long ride. Avoid any deep discharge of the rechargeable battery.

Fully discharge your rechargeable battery every three month and recharge it then immediately. This calibrates the capacity indicator and restores its accuracy.

Note that the rechargeable battery of your EPAC/EAPC will show signs of wear over the years. The capacity of the battery will constantly reduce as a result thereof; in addition, the range per battery charge will be significantly shorter than in the beginning. After a certain period of time it is even necessary to replace the battery.

SAFETY INSTRUCTIONS

For more information about how to use the battery's performance to the maximum, see chapter "Safe Handling of the Rechargeable Battery".

**Riding without Drive Assistance**

You can also use your Raymon EPAC/EAPC without drive assistance, i.e. just like a conventional bicycle.

Observe the following points when riding with the drive switched off or with a discharged rechargeable battery:

- Switch on the control element of your Raymon EPAC/EAPC at the handlebar, even when riding without drive assistance; the functions of your cycle computer are only then available.
- If the lighting system (f) is powered by the rechargeable battery, it can even be used when the battery is empty. It is, however, recommended that you recharge the battery immediately after you have returned.
- After you have removed the battery of your Raymon EPAC/EAPC from the down tube (g) or the pannier rack: Keep the connections of the rechargeable battery (h) free of dirt and moisture. Protect the connections of your rechargeable battery with the protective covers, if supplied. With the battery removed the display and in particular the lighting system will most probably no longer work. You should no longer use the Raymon EPAC/EAPC on public roads and under no circumstances ride in poor visibility, twilight or darkness.

RIDING AN ELECTRIC CARRIER CYCLE – SPECIAL FEATURES

Your electric carrier cycle was specifically designed for transporting cargo as well as heavier and bulky goods (a). With specific seats and straps some electric carrier cycles are also suitable for transporting children. Transporting cargo differs a lot from riding a classic bicycle or EPAC/EAPC and requires that you get used to it.

Be sure to load the loading surface evenly. Heavy packages should be loaded as far down and backwards as possible. Make sure the cargo does not protrude on the sides. Secure the cargo against shifting, e.g. by using tightening straps (b).

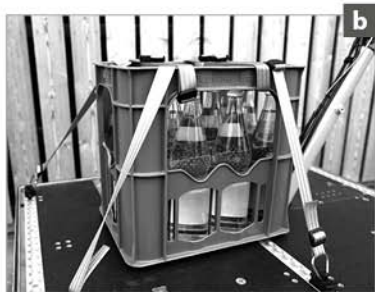
Riding an electric carrier cycle requires special skills and care. Start by riding your electric carrier cycle in unloaded condition in an area free of traffic (c) and other road users until you have full control of it. Also practise cornering (d) and riding downhill as well as braking and emergency braking. Once you feel secure try out riding with cargo which you should increase gradually.

You will quickly notice that the riding characteristics are much slower than that of a classic bicycle. Ride therefore defensively and anticipate a larger turning circle, longer evasive manoeuvres and stopping distances.

Also practise parking (jacking up) the electric carrier cycle.

⚠ WARNING

- ***Do not set off before having safely stowed, i.e. actively secured the items in the transport box with tightening straps. Cargo shifting may otherwise modify the centre of gravity and result in critical riding situations. Risk of accident!***
- ***Stow heavy items in the transport box or on the loading surface as far down and towards the middle of the electric carrier cycle as possible. When distributing the loads make sure your electric carrier cycle is loaded as evenly as possible.***
- ***Do not overload your electric carrier cycle. Your EPAC/EAPC is designed for a maximum permissible overall weight including the rider, the luggage, the EPAC/EAPC and the child seat or trailer load, if permitted. The maximum permissible overall weight is specified on the type plate on the EPAC/EAPC or in the Raymon bike card in these operating instructions. If you are in doubt, contact your Raymon dealer.***
- ***Adjust the tyre pressure to the additional weight. The maximum pressure is indicated on the tyre side.***



WARNING

Both luggage and loads modify the riding characteristics of your electric carrier cycle in general and lengthen the braking distance! Therefore, practise riding and braking with your loaded electric carrier cycle in a place free of traffic. Ride particularly considerate and anticipate critical situations.

Different carrier cycles are designed for different purposes of use. Please note that not every model is suitable for the transport of children. The transport of children in carrier cycles without specific equipment is dangerous and therefore forbidden! Ask your Raymon dealer whether your model is suitable for child transport in general and whether it can be retrofitted with specific equipment for the transport of children.

Keep in mind that too much additional load will also increase wear. Check therefore the condition of the wearing parts regularly, at least observe the intervals given in the chapter "Service and Maintenance Schedule" in your general Raymon bicycle user manual. Under adverse conditions, e.g. when you ride a lot in rainy and dirty conditions and with a lot additional load or when you do a lot of altitude metres, you have to anticipate even clearly shorter intervals.

SAFETY INSTRUCTIONS

Your electric carrier cycle is longer and wider than a usual bicycle or EPAC/EAPC. There is not always enough space for electric carrier cycles provided in bike-parking facilities. Make sure that you neither obstruct the road nor the bike lane/footpath, e.g. for wheelchair users, when parking your electric carrier cycle.

The regulations and rules for electric carrier cycles are continuously revised. Read the daily press to keep you informed about current legislative changes.

SAFE HANDLING OF THE RECHARGEABLE BATTERY

When you do not use your Raymon EPAC/EAPC for a longer period of time (e.g. during the winter season) observe some particularities. Store the rechargeable battery (g) or the complete Raymon EPAC/EAPC when the battery is integrated in the frame in a dry room at temperatures between 5 and 20 °C (41 and 68 °F). The state of charge should be 50 to 70 % of the charging capacity. Check the state of charge, if the rechargeable battery is left unused for more than two months, and recharge it in between, if necessary (h).

Clean the battery housing with a dry or, if at all, a slightly moist rag. Look out for possible defects of the housing. Do not direct the water jet of a high-pressure cleaner at the rechargeable battery, as there is a risk of water entry and/or short-circuit. Check after every cleaning process whether the area around the rechargeable battery is free of water and whether the contacts are dry.

You find more information on the proper handling of your rechargeable battery in the system instructions of the drive system manufacturer. If you are not absolutely sure about the manufacturer of your drive system, contact your Raymon dealer.



⚠ WARNING

Charge your battery (a) with the supplied charger only. Do not use the charger of any other manufacturer, not even when the connector of the charger matches your rechargeable battery (b). The rechargeable battery can heat up, catch fire or even explode!

Charge the battery with an ambient temperature of 15 to 25 °C (59 to 77 °F). Let hot batteries cool down beforehand. You should also let the battery warm up to room temperature before connecting it to the charger in winter or after a ride in cold weather.

We recommend that you charge your battery during the day and only in dry rooms which have a smoke or a fire detector; but keep it off your bedroom. Place the battery during the charging process on a big, non-flammable plate (c) made of ceramics or glass! Unplug the battery once it has been charged up.

Make sure your rechargeable battery (d) is in sound condition. Do not open, disassemble or crush the battery. Risk of explosion!

Do not use a rechargeable battery or a charger that is defective. If you are in doubt or if you have any questions, contact your Raymon dealer.

⚠ WARNING

Keep the rechargeable battery and the charger out of the reach of children!

Do not charge any other electrical devices with the supplied charger of your Raymon EPAC/EAPC!

Keep your battery away from fire and heat. Risk of explosion!

The drive is not approved for steam cleaning, high-pressure cleaning or cleaning with a water hose. The contact of the electrics or the drive with water can destroy the units. Risk of explosion!

Do not short-circuit rechargeable batteries. Store them therefore in a safe storage place and make sure there is no accidental contact with other conductive materials, e.g. metal parts, which might cause a short-circuit with each other. Do not deposit any objects in the storage area (e.g. clothes).

Keep the rechargeable battery and the charger away from moisture and water during the charging process to exclude electric shocks and short circuits.

Do not expose your battery or the charger to the blazing sun during charging. Temperatures above 40 °C (104 °F) may result in a failure of the battery.



WARNING

Make sure to use the battery only for the Raymon EPAC/EAPC for which it is designed.

If the rechargeable battery or the charger (or parts of it) must be replaced, only use original spare parts. Contact your Raymon dealer.

NOTICE

When you remove your battery (e) from the holder for charging it with your Raymon EPAC/EAPC left in the open during the charging process, you should protect the connections (f), e.g. with a plastic bag against rain, water, moisture and dirt. If the connections of the rechargeable battery are soiled, clean them with a dry rag.

Make sure not to discharge your rechargeable battery completely (also referred to as depth discharge). This occurs often when the battery has run out completely and the Raymon EPAC/EAPC was left standing for some days. Depth discharge will affect the rechargeable battery of your Raymon EPAC/EAPC permanently. A deep-discharged battery can only be recharged in exceptional cases and with special chargers. Contact your Raymon dealer.

NOTICE

If possible, remove the rechargeable battery from your Raymon EPAC/EAPC or e-bike if you do not use your Raymon EPAC/EAPC for a longer period of time and keep it clean and dry.

Do not charge your battery over a long period of time, if you do not need it. When the battery is fully charged remove the charger at short term.

Do not dispose of your rechargeable battery in the normal household rubbish (g)! It must be disposed of according to battery disposal regulations. Therefore, sellers of new rechargeable batteries must provide collection of old batteries and appropriate disposal. If you are in doubt or if you have any questions, contact your Raymon dealer.

SAFETY INSTRUCTIONS

Lithium-ion batteries have no memory effect; they can therefore be charged regardless of their state of charge without affecting their charging capacity.

Also observe the notes on the respective labels on the rechargeable battery or on the charger (h).



TRANSPORTING THE EPAC/EAPC

By Car

Raymon EPACs/EAPCs can be transported like conventional bicycles outside (a) or inside the car. Always make sure the EPAC/EAPC is securely fastened outside or inside the car and check the fastenings regularly. In addition, you should always remove the battery from the EPAC/EAPC (b), if possible, prior to fastening the EPAC/EAPC on the car roof. Stow the battery in its original cardboard box (from the Raymon dealer) and, if mounted, the removable display unit inside the car and secure it appropriately to avoid any damage during transport. Also dismount accessories, such as a tyre pump, panniers, etc.

For more information see chapter "Transporting the Bicycle by Car" of your general Raymon bicycle user manual.

CAUTION

The weight or the weight distribution on EPACs/EAPCs differs significantly from that on bicycles without drive system. An EPAC/EAPC is clearly heavier than a bicycle without drive assistance. For this reason parking, pushing, lifting and carrying the Raymon EPAC/EAPC is more difficult. Bear this in mind when loading your Raymon EPAC/EAPC into a car and unloading it or when mounting it on a bicycle carrier system.



NOTICE

Before transporting several Raymon EPACs/EAPCs with a roof mounting or a rear mounting carrier system, inform yourself about the maximum load capacity of the bicycle carrier. Keep in mind that the weight of an EPAC/EAPC is higher than the weight of a bicycle without drive. It could be that you are only allowed to transport one or two Raymon EPACs/EAPCs instead of three bicycles without drive.

Make sure to remove all movable and loose parts (c) and above all the rechargeable battery, the control element and the cycle computer on the handlebar before transporting the Raymon EPAC/EAPC inside or outside the car. If you transport your Raymon EPAC/EAPC without its battery on a bike carrier system, protect the connections against water, moisture and dirt, e.g. with a plastic bag.

SAFETY INSTRUCTIONS

If necessary, inform yourself about the laws and regulations concerning bicycle or EPAC/EAPC transport in the countries that you intend to transit during your journey. The laws and regulations differ, e.g. with regard to the marking (d).

By Train / By Public Transport

Raymon EPACs/EAPCs (e) can be transported like conventional bicycles by public transport.

Taking bicycles or EPACs/EAPCs with you by public transport is permitted in general (f), the regulations applicable in the cities differ, however. There are e.g. some places where you are only allowed to travel with your EPAC/EAPC during off-peak hours and with an additional bicycle ticket. Inform yourself in time about the regulations of carrying the EPAC/EAPC before you start the trip!

In some countries regional trains have special spaces for the storage of EPACs/EAPCs and other things. This is an option to take your Raymon EPAC/EAPC with you. They are often at the front or end of a train and marked with a bicycle sign.

When taking a high-speed train check whether you can take your EPAC/EAPC or bicycle with you.

⚠ CAUTION

If the rechargeable battery of your Raymon EPAC/EAPC is mounted to the down tube (g) or to the pannier rack, you can remove the battery (h) for an easier boarding and disembarking.



SAFETY INSTRUCTIONS

Before you start your trip inform yourself in time about the conditions of carriage and also observe the regulations and rules about bicycle transport in the countries through which you intend to travel.

By Plane

If you intend to take your Raymon EPAC/EAPC by plane or to dispatch it by a forwarding agent, you have to observe particular packing and labelling requirements for rechargeable batteries which are considered as hazardous goods. Contact the airline, an expert for hazardous items or the forwarding agent in time.

SAFETY INSTRUCTIONS

Contact the airline with which you intend to travel in time and inform yourself about conditions and possibilities of taking your Raymon EPAC/EAPC with you.

AFTER AN ACCIDENT

1. Check the rechargeable battery (a). If the rechargeable battery is no longer properly in its holder or shows any damage, do not use your Raymon EPAC/EAPC any longer, at least not in the assistance mode. Switch off the motor/drive unit and the battery separately, if necessary. A damaged battery can lead to a short-circuit resulting in a sudden failure of the Raymon EPAC/EAPC assistance right at the moment when you need it.

Damage to the outer housing of the rechargeable battery can result in water or moisture entry which can lead to short circuits or electric shocks. The rechargeable battery may catch fire or even explode! In such a case, contact your Raymon dealer immediately.

2. Check the display. Are all values displayed as usual (b)? Do not use your Raymon EPAC/EAPC, if the display shows an error message or a warning. If necessary, switch off the system and wait ten seconds at least before you check it again.

Do not set off on your Raymon EPAC/EAPC with motor assistance when the control element shows a warning. In such a case, contact your Raymon dealer immediately.

You find more information in the system instructions of the drive system manufacturer. If you are not absolutely sure about the manufacturer of your drive system, contact your Raymon dealer.

3. Check whether the wheels are still firmly fixed in the drop-outs (c) and whether the rims are still centered with respect to the frame or fork. Spin the wheels and observe the gap either between frame and tyre or between brake pads and rim sides.

If the width of the gap changes markedly and you have no way to true the wheel where you are, you will need to release the rim brake a little so that the rim can run between the brake pads without touching them. Note that in this case the brakes may not act as powerfully as you are used to.

For more information see chapters **"How to Use Quick-Releases and Thru Axles"**, **"Brake System"** and **"Wheels and Tyre Equipment"** of your general Raymon bicycle user manual as well as the enclosed operating instructions.



4. Check that handlebar and stem are neither bent nor broken and that they are level and upright. Check whether the stem is firmly fixed in the fork by trying to turn the handlebar relative to the front wheel (d). Briefly lean on the brake levers or brake levers/shifters to make sure the handlebar is firmly fixed in the stem.

Realign the components, if necessary, and gently tighten the bolts to ensure a reliable clamping of the components. You find the torque values on the components themselves, in the chapter **“Recommended Torque Values”** in your general Raymon bicycle user manual or in the possibly enclosed instructions of the component manufacturers. Alternatively, you find them in the download area on the websites of the respective component manufacturers.

For more information see chapters **“Adjusting the Bicycle to the Rider”** and **“Headset”** of your general Raymon bicycle user manual and the enclosed operating instructions.

5. Check whether the chain still runs on the chainrings and the sprockets. If your Raymon EPAC/EAPC fell over to the chain side, verify the proper functioning of the gears. Ask somebody to lift the Raymon EPAC/EAPC by the saddle and carefully shift through all the gears.

Pay particular attention when switching to the small gears, making sure the rear derailleur does not get too close to the spokes as the chain climbs onto the larger sprockets (e+f).

If the rear derailleur or the drop-outs/derailleur hanger are bent, the rear derailleur may collide with the spokes. This in turn can destroy the rear derailleur, the rear wheel or the frame. If necessary, check the function of the front derailleur, as a displaced front derailleur can throw off the chain, thus interrupting suddenly the drive of the Raymon EPAC/EAPC.

For more information see chapter **“Gears”** of your general Raymon bicycle user manual and the enclosed operating instructions.

6. Make sure the saddle is not out of alignment using the top tube or the bottom bracket shell as a reference. If necessary, open the clamping, realign the saddle and retighten the clamping (g).

For more information see chapters **“How to Use Quick-Releases and Thru Axles”** and **“Adjusting the Bicycle to the Rider”** of your general Raymon bicycle user manual and the enclosed operating instructions.



7. Let your Raymon EPAC/EAPC bounce on the ground from a small height. If there is any rattling, check the proper fit. Check the bearings, the bolts and the proper seat of the battery (h, p. 29) and the connector (a+b), if necessary.

You find more information in your general Raymon bicycle user manuals and in the system instructions of the drive system manufacturer. If you are not absolutely sure about the manufacturer of your drive system, contact your Raymon dealer.

8. Finally, take a good look at the whole Raymon EPAC/EAPC to detect any deformations, colour changes or cracks (c).

Ride back very carefully by taking the shortest route possible, even if your Raymon EPAC/EAPC went through this check without any problems. Do not accelerate or brake hard and do not ride your Raymon EPAC/EAPC out of the saddle. If you are in doubt about the performance of your Raymon EPAC/EAPC, have yourself picked up by car, instead of taking any risk.

Back home you need to recheck your Raymon EPAC/EAPC (d) thoroughly. The damaged parts must be replaced. Ask your Raymon dealer for help.

⚠ WARNING

Deformed components can break without previous warning. They must not be repaired, i.e. straightened, as this will not reduce the imminent risk of breakage. This applies in particular to the fork, the handlebar, the stem, the cranks, the seat post and the pedals. When in doubt, it is always recommendable to have these components replaced, as your safety comes first. Ask your Raymon dealer for help.

NOTICE

After an accident or after your Raymon EPAC/EAPC toppled over, make it a rule to check the functioning and in particular the limit stops of the rear derailleur.



SERVICE AND MAINTENANCE

Your Raymon dealer will have assembled and adjusted your Raymon EPAC/EAPC ready for use when you come to collect it. Nevertheless, your Raymon EPAC/EAPC needs regular servicing (e). Have your local Raymon dealer do the scheduled maintenance work. This is the only way to ensure that all components function safely and reliably for many kilometres/miles.

The Raymon EPAC/EAPC will be due for a first inspection after 100 to 300 kilometres (60 to 180 miles) or 5 to 15 hours of use and/or three to six weeks. The Raymon EPAC/EAPC must be serviced, because in this initial "break-in" period of use, safety-relevant bolted connections and spokes can slightly lose tension or gears may go out of adjustment. This "break-in" period is unavoidable.

Therefore, remember to make an appointment with your Raymon dealer for the first inspection of your new Raymon EPAC/EAPC. The first service is very important for both functioning and durability of your Raymon EPAC/EAPC.

⚠ WARNING

The individual drive components can be cleaned with a soft rag and neutral detergents. You may use a moist rag, but not excessive water. Keep the rechargeable battery dry and do not submerge it! Risk of explosion!



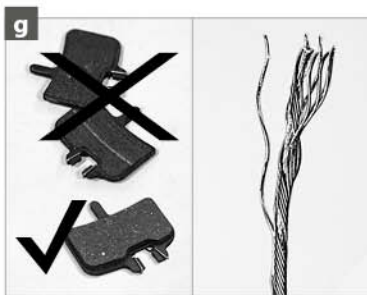
NOTICE

Note that the battery of your Raymon EPAC/EAPC will show signs of wear over the years. This will result in a degradation of the battery and more and more reduce the range per battery charge. After a certain period of time it is even necessary to replace the battery.

Keep in mind that the auxiliary drive may lead to partly higher wear than you are used to. This applies in particular to the brakes and the tyres and in the case of mid-mounted motors to the chain (f) and the sprockets.

The intended use of the Raymon EPAC/EAPC includes regular servicing and the replacement of worn out parts in time, e.g. chains, brake pads (g) or Bowden and brake cables (g), and therefore has an influence on the warranty and the guarantee as well.

You should have your Raymon EPAC/EAPC serviced regularly by your Raymon dealer after the initial "break-in" period of use. If you ride often on poor road surfaces and with adverse weather conditions, the time between the service intervals (h) will shorten according to the harder use. The off-season during the winter months is a very good time to take your Raymon EPAC/EAPC to your Raymon dealer for the strongly recommended, comprehensive annual inspection, as they will have plenty of time for you and your Raymon EPAC/EAPC.



RAYMON	
1st SERVICE SCHEDULE - STAMP FIELDS 1st service After 100-300 kilometres (60-180 miles) or 5-15 hours of use or the latest at the one year Order no. _____ Date _____ Make _____ () All necessary maintenance work carried out per service and maintenance schedule, repaired or replaced parts.	
Stamp and signature of the Raymon dealer: _____	
2nd service After 1 year (12 months) or 1000 km (600 miles) or 100 hours of use or the latest at the one year Order no. _____ Date _____ Make _____ () All necessary maintenance work carried out per service and maintenance schedule, repaired or replaced parts.	
Stamp and signature of the Raymon dealer: _____	

If in case of a repair no original spare parts are available, observe the "Guidelines for the parts replacement on CE marked e-bikes/EPACs/EAPCs with 250 watts and a pedal assist of up to 25 kmh (15.5 mph)" issued by the German umbrella organisation for the cycle industry guilds BIV, velotech, the German service and bicycle association VSF, Zedler-Institut and the German bicycle association ZIV. It can be downloaded on the websites. If you have any questions, contact your Raymon dealer.

Note that the components of your **speed pedelec** must be replaced by original spare parts only to grant type approval and provide insurance cover.

Components which must not be replaced or only after a type test, e.g. carried out by a technical inspection authority: Frame, fork, drive unit, rechargeable battery, tyres, rims, brake system, front and rear light, kickstand, handlebar, stem (a), control element/display. If a component needs to be replaced, make it a rule to only use original spare parts (b).

The following components may be replaced, even without any further test: Pedals (pedal reflectors are compulsory) (c), mudguards (with rounded edge at the front mudguard), pannier rack (d), saddle and rubber grips on the handlebar, gear components (provided the highest transmission remains identical), seat post, chain, headset, inner tube and hub as well as bell and rear view mirror (when replaced by equivalent models).



⚠ WARNING

Servicing and repairs are jobs best left to your Raymon dealer. If you have your Raymon EPAC/EAPC serviced by anyone else than an expert, you run the risk that parts of your Raymon EPAC/EAPC will fail. Risk of accident! When working on your Raymon EPAC/EAPC restrict yourself to jobs for which you are equipped e.g. with a torque wrench including bits and have the necessary knowledge.

If a component needs to be replaced, make it a rule to only use original spare parts. Wearing parts of other manufacturers, e.g. brake pads or tyres that are not of identical size, may cause harm to the safety of your Raymon EPAC/EAPC. Risk of accident! In the case of speed pedelecs be sure to only assemble original spare parts, otherwise the operating licence expires.

SAFETY INSTRUCTIONS

For further information on the parts replacement see the "Guidelines for the parts replacement on speed pedelecs with type or individual approval with a pedal assist of up to 45 kmh (28 mph)" issued by the German umbrella organisation for the cycle industry guilds BIV, TÜV Rheinland, velotech, the German service and bicycle association VSF, Zedler-Institut and the German bicycle association ZIV. They can be downloaded on the websites.

⚠ WARNING

Do not position your Raymon EPAC/EAPC upside down in general (e). When turning the Raymon EPAC/EAPC upside down the add-on parts, in particular those of the handlebar, may sustain damage. This can render the brakes ineffective!

Only use original spare parts for servicing and repair. If you do not, the CE marking as well as your warranty will become null and void. Ask your Raymon dealer for help.

⚠ CAUTION

Remove the rechargeable battery (f) or the display (g) before doing any work on your Raymon EPAC/EAPC (e.g. servicing, repairs, assembly, maintenance, work on your drive etc.). Activating the drive systems unintentionally bears the risk of injury!

Do neither touch rotating wheels on surface or spokes nor disc brakes during the ride or servicing. Risk of injury!

Do not reach between chain and cassette sprockets during servicing and repair of the chain and the sprockets with the chainguard removed. Risk of injury!

NOTICE

A rechargeable battery that has reached the end of its service life may not be disposed of in the normal household rubbish. Bring the rechargeable battery to the dealer (h) where you buy your new one. For more information see the system instructions of the drive system manufacturer. Ask your Raymon dealer for help.

SAFETY INSTRUCTIONS

If in case of a repair no original spare parts are available, observe the "Guidelines for the parts replacement" issued by the German umbrella organisation for the cycle industry guilds BIV, velotech, the German service and bicycle association VSF, Zedler-Institut and the German bicycle association ZIV. They can be downloaded on the websites. If you have any questions, contact your Raymon dealer.

For your own safety, bring your newly purchased Raymon EPAC/EAPC to your Raymon dealer for its first service after 100 to 300 kilometres (60 to 180 miles), 5 to 15 hours of initial use or three to six weeks, at the very latest, however, after three months.

Note and follow the instructions given in the chapters on service and maintenance of the system instructions of the drive system manufacturer and in the general Raymon bicycle user manual of your Raymon EPAC/EAPC.



WARRANTY AND GUARANTEE

Your Raymon EPAC/EAPC was manufactured with care. Normally it is delivered to you by your Raymon dealer fully assembled.

As direct purchaser you have full warranty rights within the first two years after purchase. Please contact your Raymon dealer in the event of defects.

To ensure a smooth handling of your complaint, it is necessary to present your receipt, your Raymon bike card, the handover report and the service reports. Therefore, be sure to keep these documents in a safe place.

To ensure a long service life and good durability of your Raymon EPAC/EAPC, use it only for its intended purpose (see chapters **"Before Your First Ride"** and **"Intended Use"**). Observe the maximum permissible overall weight that is specified on the type plate on the Raymon EPAC/EAPC or in the Raymon bike card in these operating instructions. If you have any questions, contact your Raymon dealer. Be sure to follow the manufacturers' mounting instructions (above all, the torque values of the bolts) as well as the prescribed maintenance schedule.

Observe the checks and routines listed in the present supplementary EPAC/EAPC instructions, the system instructions of the drive system manufacturer, your general Raymon bicycle user manual and in any other operating instructions enclosed with this Raymon EPAC/EAPC (see chapter **"Service and Maintenance Schedule"** in your general Raymon bicycle user manual) as well as any instructions as to the replacement of safety-relevant components, such as handlebars, brakes etc.

SAFETY INSTRUCTIONS

This warranty law is only valid in the countries that have implemented the EU Directive into national law. Inform yourself about the regulations in your country. In the United Kingdom, see the respective regulations in the Consumer Rights Act 2015 (CRA 2015).

A Note on Wear

Some components of your Raymon EPAC/EAPC are subject to wear due to their function. The rate of wear will depend on care and maintenance and the way you use your Raymon EPAC/EAPC (mileage, riding in the rain, dirt, salt, additional cargo etc.). Raymon EPACs/EAPCs that are often left standing in the open may also be subject to increased wear through weathering.

The components below require regular care and maintenance. Nevertheless, sooner or later they will reach the end of their service life, depending on conditions and intensity of use. Parts that have reached their limit of wear must be replaced.

This concerns:

- Rechargeable battery
- Drive chain
- Brake pads
- Brake fluid (DOT)
- Brake discs/rotors
- Brake cables
- Brake cable housings
- Seals of suspension elements
- Rims (of rim brakes)
- Rubber grips
- Cables/connectors
- Chainrings
- Illuminants
- Tyres and inner tubes
- Sprockets
- Saddle covering
- Bowden cables
- Bowden cable housings
- Pulleys
- Lubricants

SAFETY INSTRUCTIONS

Ask your Raymon dealer about any additional guarantee given by the manufacturer of your Raymon EPAC/EAPC and insist on having it as printed version.

HANDOVER REPORT

The above-described Raymon EPAC/EAPC was delivered to the customer ready for use, i.e. after its final assembly, inspection and functional check as described below (additionally required routines in parentheses).

- ☐ Battery partially charged ☐ Lighting ☐ Brakes front and rear
☐ Suspension elements (adjusted to suit customer)
☐ Wheels (trueness/spoke tension/tyre pressure)
☐ Handlebar/stem (position/bolts with torque wrench)
☐ Pedals (adjustment of release force, if necessary)
☐ Saddle/seat post (saddle height and position of saddle adjusted to suit customer, bolts with torque wrench)
☐ Gears (limit stops!)
☐ Bolted connections of add-on parts (with torque wrench)
☐ Motor/drive unit/display
☐ Other routines performed _____

- ☐ Test ride carried out

Name
Raymon dealer _____

Street _____

ZIP code/city _____

Phone/Fax _____

E-mail _____

Delivery date,
 stamp,
 signature of
 Raymon dealer _____

The customer confirms with his signature that he received the Raymon EPAC/EAPC in proper condition along with the accompanying documents specified below and that he was instructed on the proper use of the Raymon EPAC/EAPC.

- ☐ General Raymon bicycle user manual

Additional instructions

- ☐ Brake system ☐ Drive system ☐ Battery ☐ Gear system
☐ Seat post, stem ☐ Suspension fork ☐ Pedal system ☐ Others
☐ System instructions of the drive system manufacturer

Name customer _____

Street _____

ZIP code/city _____

Phone/Fax _____

E-mail _____

City, date _____

Signature of
 customer _____

- ☐ I hereby expressly consent that my above-mentioned data are stored by the Raymon dealer and made available to the manufacturer so that I can be contacted directly e.g. in the event of a recall. The data will not be transmitted to third parties or used otherwise

Signature of
 customer _____

RAYMON BIKE CARD

Manufacturer	R Raymon Bicycles GmbH	
Model		
Frame no.		
Drive system		
☐ Front wheel motor	☐ Mid-mounted motor	☐ Rear wheel motor
Battery model		
Key no.		
Voltage (Volt)		
Ampere-hour (AH)		
Capacity (watt hours)		
Suspension fork (manufacturer/model)		
– serial no.		
Rear shock (manufacturer/model)		
Frame type		
Frame size		
Size of wheels and tyres		
Colour		
Special features		

Intended Use

Use in accordance with

- ☐ category 1
- ☐ category 2 "Everyday"
- ☐ category 2 "Sports"
- ☐ category 3
- ☐ category 4
- ☐ category 5
- ☐ category 6

Empty weight EPAC/EAPC (incl. battery) _____ kg

Maximum permissible overall weight

Raymon EPAC/EAPC, rider, luggage and
child seat or trailer load, if permitted _____ kg

Pannier rack allowed ☐ yes ☐ no

Permissible load _____ kg

Child seat allowed ☐ yes ☐ no

Trailer allowed ☐ yes ☐ no

Permissible trailer load _____ kg

Brake levers – Brake assignment

Right lever: ☐ front wheel brake ☐ rear wheel brake

Left lever: ☐ front wheel brake ☐ rear wheel brake

⚠ WARNING

Read at least chapters "Before Your First Ride," "Intended Use" and "Before Every Ride" in the translation of these Raymon original operating instructions.

Stamp and signature of the Raymon dealer

(Hint to the Raymon dealer: Copy the Raymon bike card and the handover report and keep one copy in your customer file. Send another copy to the bike manufacturer, if necessary. Make sure the customer confirms by his signature on the handover report that his personal data are made available to the manufacturer.)

Road/Gravel

Pay particular attention to the following symbols:

⚠ WARNING

This symbol indicates a hazardous situation which could result in death or serious injury – if the relevant operational instructions are not followed or if the relevant protective measures are not taken.

⚠ CAUTION

This symbol indicates a hazardous situation which could result in minor or moderate injury – if the relevant operational instructions are not followed or if the relevant protective measures are not taken.

NOTICE

This symbol is used to address practices not related to physical injury – which may, however, result in damage to property and the environment.

SAFETY INSTRUCTIONS

This symbol indicates specific safety-related instructions or procedures about how to handle the product or refers to a section in the operating instructions that deserves your particular attention.

The described possible consequences will not be repeated in the Raymon operating instructions every time one of the symbols appears.

For the sake of better legibility, the male form is used with personal names and personal nouns throughout these Raymon operating instructions. The terms in question principally apply to all genders in the spirit of equal treatment. The abbreviated language form is used solely for editorial reasons and does not represent any value judgement.

SOME NOTES ON THIS RAYMON MANUAL

The illustrations (c+d) show typical Raymon road racing bicycles – one of these types may look similar to the Raymon bicycle you have purchased. Today's bicycles come in various types that are designed for specific uses and equipped accordingly.

These Raymon operating instructions are not intended to help you assemble a Raymon bicycle from individual components, to repair it or to make a partly assembled Raymon bicycle ready-for-use.

These Raymon operating instructions are not applicable to any other than the displayed or specified bicycle type.

Technical details in the text and illustrations of these Raymon operating instructions are subject to change.

This Raymon manual complies with the requirements of the EN ISO standard 4210-2 in the current version.

Also observe the enclosed operating instructions of the component manufacturers. These Raymon operating instructions are subject to European law. If delivered to countries outside Europe, supplementary information has to be provided by the Raymon bicycle manufacturer, if necessary.



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www.zedler.de

GENERAL SAFETY INSTRUCTIONS

Dear Raymon Customer,

In purchasing this Raymon bicycle (a) you have chosen a product of high quality and technology. Each component of your new Raymon bicycle has been designed, manufactured and assembled with great care and expertise. Your Raymon dealer gave the Raymon bicycle its final assembly and adjustment to guarantee proper operation and many enjoyable riding experiences with complete peace of mind from the very first metres.

This manual contains a wealth of information on the proper use of your Raymon bicycle, its maintenance and operation as well as interesting information on bicycle design and engineering. Read this manual thoroughly. We are sure that even if you have been cycling all your life you will find useful and detailed information. Bicycle technology has developed at a rapid pace during recent years (b). Therefore, before setting off on your new Raymon road racing bicycle, be sure to read at least the chapter **"Before Your FIRST Ride"**.

To have as much fun as possible during cycling, be sure to carry out the functional check described in chapter **"Before EVERY Ride"** before setting off.

Even a manual as big as an encyclopedia could not describe any possible combination of bicycle models and components or parts on the market. It therefore focuses on your newly purchased bicycle and standard components and provides useful information and warnings.

When doing any of the adjusting or servicing (c), be aware that the instructions and notes provided in your manual only refer to this Raymon road racing bicycle.

The information included here is not applicable to any other bicycle type. As bicycles come in a wide variety of designs with frequent model changes, the routines described may require complementary information. Be sure to also observe the instructions of the component suppliers that you received from your Raymon dealer.

Be aware that these instructions may require further explanation, depending on the experience and/or skills of the person doing the work. For some jobs you may require additional (special) tools (d) or supplementary instructions. This manual cannot teach you the skills of a bicycle mechanic.

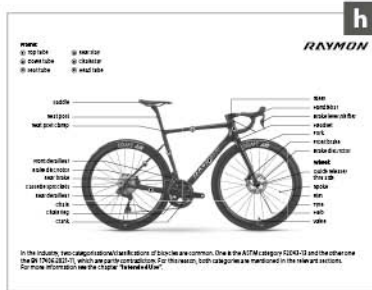


Like any sport, cycling involves the risk of injury. By choosing to ride a bike, you assume the responsibility for the risk. Note that on a bicycle you have no protection technique around you (e.g. bodywork, ABS, airbag) like you have in a car. Therefore, always ride carefully and respect the other traffic participants. Never ride under the influence of drugs, medication, alcohol or when you are tired. Do not ride with a second person on your Raymon bicycle and never ride without having both hands on the handlebar.

First we would like to familiarise you with the various components used on your bicycle. Unfold the cover of this Raymon manual (h). Here you find an exemplary bicycle showing all the essential components. Leave the page unfolded as you read so that you can easily locate the components as they are referred to in the text.

For your own safety, never do work on your Raymon bicycle unless you feel absolutely sure about it. If you are in doubt or if you have any questions, contact your Raymon dealer.

Note: During cycling you must not hold onto a moving vehicle or trailer. Keep both hands on the handlebar. Only take your feet off the pedals, if required by the condition of the road. Also bear in mind that riding with headphones is in some countries allowed as long as the acoustic perception is not impaired. Inform yourself about the law situation in the country where you use your bike.



INTENDED USE

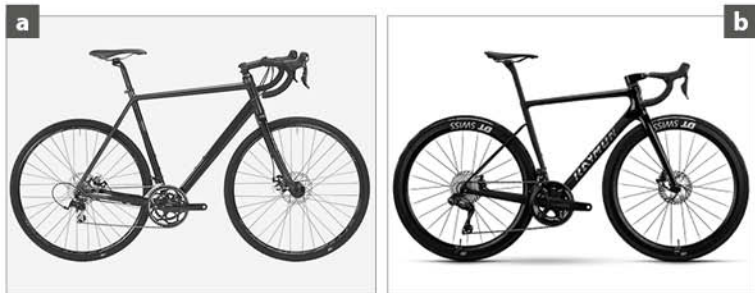
Note that each type and/or kind of bicycle, referred to as **category** in the following, is designed for a specific use. Use your Raymon bicycle only according to its intended use, as it may otherwise not withstand the loads, fail and cause an accident with unforeseeable consequences! If you use your Raymon bicycle for another than its intended purpose, the warranty will become void, in addition.

Ask your Raymon dealer to confirm the category to which your Raymon bicycle belongs. Have a look at your Raymon bike card.

Category 2 “Sports”: gravel bikes and cyclocross bikes (a)

Bicycles and components of the category 2 “Sports” are used for sports and competition rides which high effort. Bicycles and components of this category are intended for riding on paved surfaces, i.e. on asphalted roads and gravel paths where the front and rear wheels mainly remain in contact to the ground. They are also suitable for moderate technical trail features where a short loss of tyre contact with the ground due to small drops can occur.

Bicycles and components of this category are not suitable for riding over terrain of the category mountain bike.



Category 2 “Sports” describes **gravel bikes** and **cyclocross bicycles** (bicycles for riding cross country). In general, these bicycles have 28-inch wheels with narrow tyres. The tyre width is 28 to max. 42 mm.

Category 1 (ASTM F2043-13) / Category 6 (EN 17406:2021-11): road racing (b), time trial (e), triathlon and track bicycles

Bicycles and components of the ASTM category 1 / EN category 6 are used for sports and competition rides which high effort at speeds of more than 50 km/h (31 mph). Bicycles and components of this category are intended for riding on paved roads with asphalted or cobble surfaces, where the front and rear wheels remain in permanent contact to the ground.

Bicycles and components of this category are not suitable for off-road use.

Category 1 (ASTM F2043-13) / Category 6 (EN 17406:2021-11) describes **road racing**, **triathlon** and **time trial bicycles**. In general, these are road racing bicycles with drop or straight bars, triathlon bicycles or time trial machines. The tyre width is very narrow, i.e. 22 to max. 28 mm.

Due to their design and equipment, bicycles of the categories 2 “Sports” and 1 (ASTM) / 6 (EN) are not intended to be used on public roads. Prior to using them on public roads they must be equipped according to the respective rules. Observe the traffic rules when riding on public roads.

For more information see the chapter “**Legal requirements for riding on public roads**”.

The **maximum permissible overall weight** is specified on the type plate on the bicycle or in the Raymon bike card in these operating instructions. Under certain circumstances the maximum permissible overall weight can be further limited by the component manufacturers’ recommendations for use. If you are in doubt, contact your Raymon dealer.

⚠ WARNING

Be aware that the distance you need to stop your Raymon bicycle increases, when you are riding with your hands on aero bars. The brake levers are not in all gripping positions within easy reach.

Raymon bicycles of the categories 2 "Sports" and 1 (ASTM) / 6 (EN) are not suitable for riding off-road, stair riding, jumps, slides, stoppies (f), wheelies, tricks etc.!

For your own safety, do not overestimate your riding skills. Note that though looking easy the riding manoeuvres of a professional are hazardous to your life and limb. Always protect yourself with suitable clothing.

Use your Raymon bicycle only for its intended purpose, as it may otherwise not withstand the loads and fail! Risk of accident!

Your Raymon bicycle is designed for a maximum permissible overall weight including rider, luggage, Raymon bicycle and child seat or trailer load, if permitted. The maximum permissible overall weight is specified on the type plate on the Raymon bicycle or in the Raymon bike card in these operating instructions. If you are in doubt, contact your Raymon dealer.

**⚠ WARNING**

Due to their design and equipment, bicycles of the categories 2 "Sports" and 1 (ASTM) / 6 (EN) are not always intended to be used on public roads. If you want to use them on public roads, these bicycles must be equipped according to the respective rules. Observe the traffic rules when riding on public roads.

SAFETY INSTRUCTIONS

For more information about the intended use of your Raymon bicycle and the maximum permissible overall weight (rider, luggage, Raymon bicycle and child seat or trailer load, if permitted) see the Raymon bike card and chapter "Before Your First Ride".

Track bicycles are pure sports bicycles and only intended for use on outdoor or indoor cycle racing tracks. The use of track bicycles on public roads or lanes is neither intended nor permitted.

Note that track bicycles have neither freewheel nor brakes. Even if used on an indoor track it is therefore important that you are instructed accordingly by a trainer.

The **maximum permissible overall weight** is specified on the type plate on the bicycle or in the Raymon bike card in these operating instructions. Under certain circumstances the maximum permissible overall weight can be further limited by the component manufacturers' recommendations for use. If you are in doubt, contact your Raymon dealer.

⚠ WARNING

Track bicycles are not suitable for use on public roads. In addition, they are neither suitable for riding off-road, stair riding, jumps, slides, stoppies, wheelies, tricks etc.!

BEFORE YOUR FIRST RIDE

1. Your Raymon bicycle is designed for a **maximum permissible overall weight** including rider, luggage, Raymon bicycle and child seat or trailer load, if permitted. The maximum permissible overall weight is specified on the type plate on the Raymon bicycle or in the Raymon bike card in these operating instructions. If you are in doubt, contact your Raymon dealer.
2. If you want to use your Raymon bicycle on public roads, it has to comply with the respective legal requirements. These requirements may vary in each country. The equipment of your Raymon bicycle is, therefore, not necessarily complete (a). Ask your Raymon dealer for the laws and regulations applicable in your country or in the country you intend to use the Raymon bicycle. Have your Raymon bicycle equipped accordingly, before using it on public roads.
3. Are you familiar with the brake system (b)? Have a look at the Raymon bike card and check whether you can actuate the front brake with the brake lever/shifter you are used to (right or left). If this is not the case, ask your Raymon dealer to switch the brake levers/shifters before you set off for the first time.



Your new Raymon bicycle is equipped with modern brakes (c) which may be far more powerful than those you were used to so far. Be sure to first practise using the brakes on a level, non-slip surface off public roads!

For more information see chapter **"Brake System"** and the enclosed operating instructions.

4. Are you familiar with the type and functioning of the gears (d)? Ask your Raymon dealer to explain the gear system to you and make yourself familiar with your new gears in an area free of traffic.

For more information see chapter **"Gears"** and the enclosed operating instructions.

5. Are both saddle and handlebar properly adjusted? The saddle should be set to a height from which you can just reach the pedal in its lowest position with your heel. Check whether your toes reach to the floor when you are sitting on the saddle (e). Your Raymon dealer will be pleased to help you, if you are not happy with your seating position.

For more information see chapter **"Adjusting the Bicycle to the Rider"**.

6. If your Raymon bicycle is equipped with clipless or step-in pedals (f): Have you ever tried cycling with the respective cycling shoes? Do not set off until you have practised engaging and disengaging the shoes in standing (g). Ask your Raymon dealer to explain the pedals to you.

For more information see chapter “Pedals and Shoes” and the enclosed operating instructions.

⚠ WARNING

Use your Raymon bicycle only for its intended purpose, as it may otherwise not withstand the loads and fail! Risk of accident!

A lack of practice when using clipless pedals or too much spring tension in the mechanism can lead to a very firm connection, from which you cannot quickly step out. Risk of accident!

Regular maintenance of your Raymon bicycle is essential for its suitability and decisive for its safety. You as owner are the only one who knows how often you use your Raymon bicycle, where you use it and how hard you do. It is therefore your responsibility, to have regular servicing and maintenance carried out. For more information see chapter “Service and maintenance schedule” or contact your Raymon dealer.

⚠ WARNING

Be aware that the distance you need to stop your Raymon bicycle increases, when you are riding with your hands on aerobars. The brake levers are not in all gripping positions within easy reach.

⚠ CAUTION

In particular, make sure there is enough clearance between your crotch and the top tube (h) so that you do not hurt yourself, if you have to get off quickly.

NOTICE

We recommend that you take out private liability insurance. Make sure that coverage for this kind of damage is provided by your insurance. Contact your insurance company or agency.

SAFETY INSTRUCTIONS

Before hitching a trailer to your Raymon bicycle or mounting a child carrier, have a look at the Raymon bike card and contact your Raymon dealer.



BEFORE EVERY RIDE

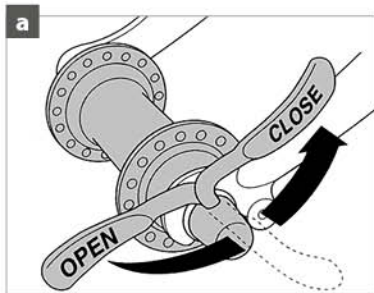
Your Raymon bicycle has undergone numerous tests during production and a final check has been carried out by your Raymon dealer. Nevertheless, be sure to check the following points to exclude any malfunctioning that may be due to the transport of your Raymon bicycle or to a work a third person may have performed on your Raymon bicycle before delivery:

1. Are the quick-release levers (a) of the front and rear wheel properly closed and the bolts of the seat post and other components accurately tightened?

For more information see chapter **"How to Use Quick-Releases and Thru Axles"**.

2. Are the tyres in good condition and do they have sufficient pressure (b)? A higher pressure gives a better riding stability and reduces the risk of a puncture. The minimum and maximum pressure (in bar or psi) is indicated on the tyre side.

For more information see chapter **"Wheels and Tyre Equipment"** and the enclosed operating instructions.



3. Spin the wheels to check whether the rims are true. Watch the gap between rim and brake pad. Untrue rims can be an indication of tyres with ruptured sides, broken axles or spokes.

For more information see chapter **"Wheels and Tyre Equipment"** and the enclosed operating instructions.

4. Test the brakes in standing by firmly pulling the brake levers/shifters towards the handlebar (c). The brake pads of **rim brakes** must hit the rim evenly with their entire surface without touching the tyre during braking, in open condition or in between. You should not be able to pull the brake levers/shifters all the way to the handlebar! Also check the thickness of the brake pads.

With **disc brakes** (d) you should have a stable pressure point at once. If you have to actuate the brake lever more than once to get a positive braking response, have the Raymon bicycle checked by your Raymon dealer. You should not be able to pull the lever all the way to the handlebar. If your bike has hydraulic brakes, check the hydraulic brake hoses for oil or brake fluid leaks! Also check the thickness of the brake pads.

For more information see chapter **"Brake System"** and the enclosed operating instructions.

5. Let your Raymon bicycle bounce on the ground from a small height (e). If there is any rattling, check the proper fit. Check the bearings and bolted connections, if necessary.
6. If you want to ride on public roads, make sure your Raymon bicycle is equipped according to the regulations of your country (f). Riding without lights and reflectors in dark or dim conditions is very dangerous because you will be seen too late or not at all by other road users. A permissible lighting system is a must on public roads. Turn on the lights as soon as dusk sets in.

For more information see chapter “**Legal requirements for riding on public roads**”.

7. Do not forget to take a high-value D-, folding (g) or chain lock with you on your ride. The only way to effectively protect your Raymon bicycle against theft is to lock it to an immovable object.

⚠ WARNING

- Do not use your Raymon bicycle, if it fails on one these points! Riding a defective Raymon bicycle can result in serious accidents! If you are in doubt or if you have any questions, contact your Raymon dealer.
- Improperly closed fastenings can cause components to come loose and result in serious accidents!
- During use your Raymon bicycle is undergoing stress resulting from the surface of the road and from the rider's action. Due to these dynamic loads, the different parts of the Raymon bicycle react with wear and fatigue. Check your Raymon bicycle regularly for wear marks, scratches, deformations, colour changes and any indication of cracking. Components which have reached the end of their service life may fail suddenly without previous warning.
- Be aware that the distance you need to stop your Raymon bicycle increases, when you are riding with your hands on aerobars (h). The brake levers are not in all gripping positions within easy reach.

SAFETY INSTRUCTIONS

- Let your Raymon dealer maintain and service your Raymon bicycle regularly and in cases of doubt it is always best to replace components.



AFTER AN ACCIDENT

1. Check whether the wheels are still firmly fixed in the drop-outs (a) and whether the rims are still centred with respect to the frame or fork. Spin the wheels and observe the gap either between brake pads and rim sides or between frame and tyre. If the width of the gap changes markedly and you have no way to true the rim where you are, you will need to open the rim brake a little so that the rim can run between the brake pads without touching them. Note that in this case the brakes may not act as powerfully as you are used to. For more information see chapters **"Brake System"**, **"How to Use Quick-Releases and Thru Axles"** and **"Wheels and Tyre Equipment"** as well as the enclosed operating instructions.
2. Check that handlebar and stem are neither bent nor broken and that they are level and upright. Make sure the stem is firmly fixed on the fork by trying to twist the handlebar relative to the front wheel (b). Briefly lean on the brake levers/shifters to make sure the handlebar is firmly fixed in the stem. Realign the components, if necessary, and gently tighten the bolts (c) to ensure a reliable clamping of the components.

You find the torque values on the components themselves, in the chapter **"Recommended Torque Values"** or in the possibly enclosed instructions of the component manufacturers. Alternatively, you find them in the download area on the websites of the respective component manufacturers. For more information see chapters **"Adjusting the Bicycle to the Rider"**, **"Headset"** and the enclosed operating instructions.

3. Check whether the chain still runs on the chainrings and the sprockets. If your Raymon bicycle fell over to the chain side, verify the proper functioning of the gears. Ask somebody to lift the Raymon bicycle by the saddle and carefully shift through all the gears. Pay particular attention when shifting to the small gears and make sure the rear derailleur does not get too close to the spokes (d) as the chain climbs onto the larger sprockets.

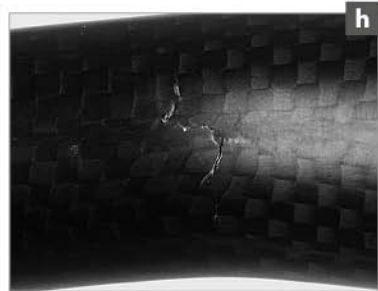
If the rear derailleur or the drop-outs/derailleur hanger are bent, the rear derailleur may collide with the spokes or the chain may slip. This can result in damage to the rear derailleur, the rear wheel and the frame.

Check the function of the front derailleur, as a displaced front derailleur can throw off the chain, thus interrupting suddenly the drive of the Raymon bicycle. For more information see chapter **"Gears"** and the enclosed operating instructions.



4. Make sure the saddle is in alignment using the top tube or the bottom bracket shell as a reference (e). If necessary, open the clamping, realign the saddle and retighten the clamping. For more information see chapters **"Adjusting the Bicycle to the Rider"**, **"How to Use Quick-Releases and Thru Axles"** and the enclosed manuals of the component manufacturers.
5. Lift your Raymon bicycle up a few centimetres and let it bounce onto the ground (f). If this causes any sort of noise, search for loosened bolts or components. Tighten them slightly, if necessary.
6. Finally, take a good look at the whole Raymon bicycle to detect any deformations, colour changes or cracks.

Ride back very carefully by taking the shortest route possible, even if your Raymon bicycle went through this check without any problems. Do not accelerate or brake hard and do not ride your Raymon bicycle out of the saddle. If you are in doubt about the performance of your Raymon bicycle, have yourself picked up by car, instead of taking any risk.



Back home you need to check your Raymon bicycle thoroughly. The damaged parts must be replaced. Ask your Raymon dealer for help. For more information about carbon components see chapter **"Carbon – Important Information"**.

⚠ WARNING

Deformed components, especially components made of aluminium, can break without previous warning. They must not be repaired, i.e. straightened, as this will not reduce the imminent risk of breakage. This applies in particular to the fork, the handlebar, the stem, the cranks, the seat post and the pedals. When in doubt, it is always recommendable to have these components replaced, as your safety comes first. Ask your Raymon dealer for help.

If your Raymon bicycle is assembled with carbon components (g), it is imperative that you have your Raymon bicycle checked by your Raymon dealer after an accident or similar incident. Carbon is an extremely strong material which combines high resistance with low weight. It is, however, one of the inherent properties of carbon that possible overstress may compromise the inner carbon-fibre structure without showing any visible deformation as is the case with steel or aluminium. A damaged component (h) can fail without previous warning. Risk of accident!

HOW TO USE QUICK-RELEASES AND THRU AXLES

Quick-Releases

Most Raymon road racing bicycles are equipped with quick-releases to ensure fast adjustments, assembly and disassembly. Be sure to check whether all quick-releases are tight before you set off on your Raymon bicycle. Quick-releases should be handled with greatest care, as they affect your safety directly.

Practise the proper use of quick-releases to avoid any accidents.

Quick-release mechanisms essentially consist of two operative elements:

1. The hand lever on one side of the hub which creates a clamping force via a cam when you close it (a).
2. The tightening nut (b) on the other side of the hub with which the preload on the threaded rod (quick-release axle) is set.

⚠ WARNING

Never ride a Raymon bicycle without having checked first whether the wheels are securely fastened (c)! Risk of accident!



⚠ WARNING

Make sure the levers of both wheel quick-releases are always on the side opposite to the chain. This will help you to avoid mounting the front wheel accidentally the wrong way round. In the case of bicycles with disc brakes and quick-releases, it may be reasonable to mount the quick-release with the levers on the side of the chain drive. This would help you not to come into contact with the rotor and prevent you from having your fingers burnt. If you are in doubt or if you have any questions, contact your Raymon dealer.

⚠ CAUTION

Do not touch the possibly hot rotor directly after having stopped – you may burn your fingers! Always let the rotor cool down before opening the quick-release.

NOTICE

If your Raymon bicycle is equipped with quick-releases, be sure to lock it to an immovable object together with the wheels when you leave it outside.

To be on the safe side you can replace the quick-releases by special locks. They can only be opened and closed with a special, coded key or an Allen key (d). If you are in doubt or if you have any questions, contact your Raymon dealer.

How to Fasten Components Securely with a Quick-Release

Open the quick-release. The marking "Open" on the lever should become visible now (e).

Make sure the component to be fastened is in the accurate position. For more information see the chapters "**Wheels and Tyre Equipment**" and "**Adjusting the Bicycle to the Rider**".

Move the lever back, as if to close it. Now you should be able to read "Close" on the outside of the lever. When you start closing the lever you should feel virtually no resistance with your hand until the lever is at right angle to the frame/fork (f).

When continuing to close the lever the resistance you feel should increase significantly and towards the end even more strength is required to close the lever. Use the ball of your thumb to push it in all the way while your fingers pull on an immovable part, such as the fork (g) or the rear stay, but not on a spoke.

In its end position, the lever should be at a right angle to the quick-release axle, i.e. it should not stand out. The lever should lie close to the frame or the fork so that it cannot be opened accidentally (h). Make sure, however, the lever is easy to handle for an actually quick use.

To check whether the lever is securely locked apply pressure to the end of the hand lever and try to turn it while it is closed. If you can turn the lever around, open it and increase the preload. Screw the tightening nut on the opposite side clockwise by half a turn. Close the quick-release lever and check it again for tightness.

Finally lift the Raymon bicycle a few centimetres so that the wheel no longer touches the ground and hit the tyre from above. A securely fastened wheel remains in the axle mounts of frame or fork and will not rattle.

⚠ WARNING

With an insufficiently closed quick-release the wheel can come loose. Imminent risk of accident!



Thru Axles

Raymon road racing and cyclocross bicycles are equipped with thru axles which provide the forks and the rear frames with a higher stiffness. Whenever your Raymon road racing or cyclocross bicycle is exposed to high loads, it remains directionally stable.

SAFETY INSTRUCTIONS

Before mounting or replacing a fork/wheel combination with thru-axle system, be sure to read the operating instructions of the respective fork or wheel manufacturer first.

There is currently a wide range of thru-axle systems available. Some systems are tightened with quick-releases (a). Other systems may require special tools for assembly or disassembly. And others again have integrated levers.

The thru-axle system typically consists of two operative elements:

1. There is a nut on the right side often integrated into the frame.
2. On the left side there is either a clamping lever which can be folded, a rigid lever for tightening or a tool mount hole, e.g. for an Allen key, 5 mm.



Whatever system you use, make sure during the assembly that the thru axles, the drop-outs in forks and hubs are clean. Clean the components with an absorbent cloth, if necessary, by using water and a little detergent. In case you do not succeed in adjusting and fixing the wheel, as described, contact your Raymon dealer.

Wheel Mounting

Slide the wheel into the fork or rear frame, mount the brake disc/rotor at the same time into the brake calliper and guide the chain over the outmost sprocket of the cassette in the case of rear wheels. Make sure that in the area of the rear wheel the chain runs over the sprockets and over both pulleys of the rear derailleur (b).

Bring the wheel into the right position between the drop-outs and slide the axle with open quick-release lever from the left side through the drop-out and the hub (c).

When the axle thread engages with the nut thread, turn the axle clockwise (d). During the first rotations you should be able to rotate the thru axle nearly without resistance. Tighten the axle slightly.

Close the possibly available **quick-release lever** like a usual quick-release lever.

When you start closing the lever you should feel virtually no resistance with your hand, during the second half of the way the resistance you feel should increase significantly and towards the end even more strength is required to close the lever.

In case you do not succeed in closing the lever fully, re-open it and turn the axle a little anticlockwise. Try again to close the quick-release lever.

Use the palm of your hand to push it in all the way while your fingers pull on the rear frame (e), but not on a spoke or the brake disc/rotor.

In its end position the quick-release lever should be tight so that it can no longer be turned. Make sure the quick-release lever does not stand out to the rear or to the side. The best position is in parallel to a frame tube (f). If necessary, modify the nut to change the position.

If it fits perfectly turn the **quick-release lever** or the **tool** used clockwise to pre-tighten the thru-axle system. You will feel an increasing resistance at the lever. Only turn the axle until it is hand-tight. Observe the possibly prescribed torque values. In these cases, use a torque wrench and do not exceed the value.

Remove the tool and pack it into the saddle bag. You may need it during the ride.

If you have an RWS system slightly pull out the RWS quick-release lever (g) of the DT Swiss system to bring it into a favourable position. Turn the RWS quick-release lever then into the desired position and re-close it towards the hub. Make sure the RWS quick-release lever at the fork does not stand out to the front.

If you have rim brakes, close the quick-release lever (h) at the brake.



Wheel Removal

Open the **quick-release** and turn it anticlockwise (a). Loosen **all kinds** of thru axles anticlockwise.

After the thru-axle thread has fully loosened from the nut thread, you can pull out the thru axle. Keep frame and wheel in position, while doing so (b), to ensure that parts do not fall down or topple over.

After that you can remove the wheel.

⚠ WARNING

Improperly mounted wheels may throw you off your bike or result in serious accidents! If you have the slightest doubt or in case of any inquiries, contact your Raymon dealer.

To mount the axle only use the tools recommended by the manufacturer. Always use a torque wrench. Never exceed the maximum torque value indicated by the manufacturer! A too tight fixing of the axle can impair the axle or the frame.

⚠ WARNING

After the wheel mounting do a brake test at standstill (c). You should reach the pressure point of the brake before the brake lever reaches the handlebar. In the case of hydraulic brakes pump them, if necessary, until you reach a precise pressure point.

SAFETY INSTRUCTIONS

Manufacturers of thru-axle systems (d) deliver their products usually with detailed manuals. Read them carefully before removing the wheel or doing any maintenance work.

*More information are provided at
www.dtswiss.com – RWS System
<https://bike.shimano.com> – Shimano E-Thru
www.syntace.com – X-12
www.focus-bikes.com – R.A.T. (Rapid Axle Technology)*



ADJUSTING THE BICYCLE TO THE RIDER

Your body height and proportions are decisive for the frame size of your Raymon bicycle. In particular, make sure there is enough clearance between crotch and top tube to so you cannot hurt yourself when you have to get off quickly (e).

By choosing a specific type of Raymon bicycle you roughly determine the posture you will be riding in (f+g). However, some components of your Raymon bicycle are especially designed so that you can adjust them to your body proportions up to a certain degree. This includes the seat post, the stem and the brake levers/shifters.

As these adjustments require know-how, experience, appropriate tools and a certain amount of skill, you should restrict yourself to the adjustment of the seating position. Ask your Raymon dealer for the correct seating position or if you want something changed. They will see to your wishes the next time you leave your Raymon bicycle at the workshop, e.g. for the first inspection.

After any adjustment/assembly work, be sure to make a short functional check as described in chapter **"Before Every Ride"** and do a test ride in an area free of traffic.

⚠ WARNING

- If you have a very small frame, there may be the danger of your foot colliding with the front wheel. Therefore, make sure the cleats of your clipless pedals are properly adjusted.**
- All tasks described in the following require the know-how of a mechanic and appropriate tools. Make it a rule to tighten the bolted connections always with greatest attention. Increase the torque values bit by bit and check the fit of the component in between. Use a torque wrench and never exceed the maximum torque values! You find the torque values on the components themselves, in the chapter "Recommended Torque Values" or in the possibly enclosed instructions of the component manufacturers. Alternatively, you find them in the download area on the websites of the respective component manufacturers.**

SAFETY INSTRUCTIONS

- If sitting on the saddle is painful, e.g. because it numbs your crotch, this may be due to the saddle. Your Raymon dealer has a very wide range of saddles available, and can offer advice on position (h).**



Adjusting the Height of the Saddle

The correct saddle height for almost all bicycle types is the height which gives maximum pedalling comfort and efficiency. During pedalling the ball of your foot should be positioned above the centre of the pedal axle. With your feet in this position you should not be able to stretch your legs completely straight at the lowest point, otherwise your pedalling will become awkward (a).

Check the height of your saddle with flat-soled shoes. This is best done with suitable cycling shoes.

Sit on the saddle and put your heel on the pedal at its lowest point. Your leg should be fully stretched and your hips should remain horizontal.

To adjust the saddle height, release the seat post binder bolt (b) at the upper end of the seat tube. To do so you need suitable tools, e.g. an Allen key, with which you turn the bolt two to three turns anti-clockwise. Now you can perform the vertical adjustment of the seat post.

Be sure not to pull out the seat post too far. The mark on the seat post (min. insert, minimum, maximum, stop or the like) should always remain within the seat tube (c). Always grease the surface of an aluminium or titanium seat post that is inserted into a seat tube made of aluminium, titanium or steel.

Do not grease carbon seat posts and/or carbon seat tubes in the clamping area! Use special **carbon assembly paste** instead.

Align the saddle with the frame by using the saddle nose and the bottom bracket or top tube as a reference point.

Clamp the seat post tight again. Tighten the seat post binder bolt clockwise in half turns (d). You should not need much strength in your hands to clamp the seat post sufficiently tight. Otherwise the seat post does not match the frame.



Verify in between that the seat post is sufficiently tight by taking hold of the saddle at both ends and then trying to rotate the seat post inside the seat tube (e). If it does rotate, gently retighten the clamping bolt by half a turn and do the check again.

Does the leg stretch test now produce the correct result? Check by moving your foot and pedal to the lowest point. When the ball of your foot is exactly above the pedal centre in the ideal pedalling position, your knee should be slightly bent. If it is, you have adjusted the saddle height correctly.

Check whether you can touch the ground safely while sitting on the saddle by stretching your feet to the floor (f). If you cannot, you should lower the saddle a little, at least to begin with.

⚠ WARNING

Never apply grease or oil into a seat tube of a frame made of carbon, unless an aluminium sleeve is inside the frame. If you mount a carbon seat post, do not put any grease on it, even if the frame is made of metal. Once greased carbon fibre components may never again be clamped reliably! Use special carbon assembly paste (g) instead.



⚠ WARNING

Never ride your Raymon bicycle with the seat post drawn out beyond the min. insert, maximum, limit or stop mark (h)! The seat post might break or cause severe damage to the frame. In the case of frames with seat tubes that extend beyond the top of the frame's top tube the seat post should be inserted into the seat tube at least below the bottom of the top tube and below the top of the rear stays! If seat post and frame require different minimum insertion depths, you should opt for the deeper insertion depth.

⚠ CAUTION

Tighten carefully by approaching the prescribed maximum torque value in small steps (0.5 Nm increments) and check in between the proper fit of the component. Do not exceed the maximum torque value indicated by the manufacturer! You find the torque values on the components themselves, in the chapter "Recommended Torque Values" or in the possibly enclosed instructions of the component manufacturers. Alternatively, you find them in the download area on the websites of the respective component manufacturers.

SAFETY INSTRUCTIONS

If the seat post does not move easily inside the seat tube or if it cannot be tightened sufficiently, ask your Raymon dealer for advice. Do not use brute force!

Adjusting the Height of the Handlebar

In principle, Raymon road racing bicycles are sports bikes designed for speed. For this reason alone riding a Raymon road racing bicycle requires certain basic preconditions of the trunk, shoulder and neck muscles. The height of the handlebar compared to the saddle and the distance between saddle and handlebar determines how much your upper body will be inclined forward. Lowering the handlebar gives you a streamlined position and brings more weight to bear on the front wheel. However, it also entails an extremely forward leaning posture which is tiring and less comfortable, because it increases the strain on your wrists, arms, back, upper body and neck. As a general rule you should be able to adopt the three basic positions (a-c) on a Raymon road racing bicycle without any problems with your hands around the respective area on the handlebar.

In the case of your Raymon road racing bicycle an Aheadset®-stem allows the vertical adjustment of the handlebar. This requires special knowledge. In this regard, the descriptions hereafter may be incomplete. If you are in doubt or if you have any questions, contact your Raymon dealer.

⚠ WARNING

- *The stem is one of the load bearing parts of your Raymon bicycle. Changes to it can impair your safety. If you are in doubt or if you have any questions, contact your Raymon dealer!*
- *Stems are available in different lengths, shaft and binder tube diameters. A stem of inappropriate dimension can become a source of danger: Handlebars or stems can break, resulting in an accident. When replacing any parts, be sure to only use suitable original spare parts that bear the appropriate mark. Your Raymon dealer will be pleased to help you.*
- *The bolted connections of stem and handlebar have to be tightened to the prescribed torque values (d). If you disregard the prescribed values, the handlebar or stem may come loose or break. Use a torque wrench and do not exceed the maximum torque value indicated by the manufacturer! You find the torque values on the components themselves, in the chapter "Recommended Torque Values" or in the possibly enclosed instructions of the component manufacturers. Alternatively, you find them in the download area on the websites of the respective component manufacturers.*
- *Make sure the handlebar/stem-combination is approved by the handlebar and/or stem manufacturer.*
- *Make sure the handlebar clamping area is free of sharp edges.*



Stems for Threadless Systems, the Aheadset®-System

(Aheadset® is a registered trade mark of Dia-Compe)

In the case of Raymon bicycles with Aheadset® the stem also serves to adjust the bearing preload. If you change the position of the stem you have to readjust the bearing play (see chapter **"Headset"**). The vertical setting range is determined by the intermediate rings, also referred to as spacers (e). In the case of flip-flop stem models the stem can be mounted the other way round to achieve a different handlebar height.

Unscrew the bolt at the top of the fork steerer tube which serves to adjust the bearing preload, remove the Ahead cap and release the bolts on either side of the stem by up to three turns (f). Remove stem and spacers from the fork steerer tube. In doing so keep hold of both frame and fork to prevent the fork from slipping off the head tube.

You can determine the handlebar height by the arrangement of stem and spacers. Slip the remaining spacers onto the fork steerer tube above the stem. Adjust the headset, as described in chapter **"Headset"**.

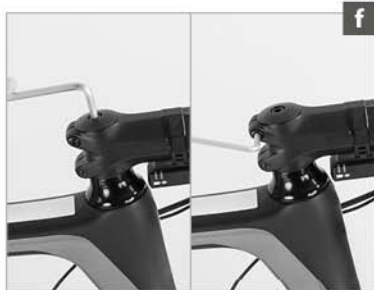
If you want to turn the stem around, you have to also release the bolts of the faceplate securing the handlebar (g).

If the stem has a faceplate, you can simply remove the handlebar. If it has no faceplate, you have to remove the handlebar equipment.

Mount the handlebar and, if necessary, the handlebar equipment, as described in chapter **"Adjusting the Tilt of Handlebar and Brake Lever/Shifter Units"** and/or in the manuals of the component manufacturers.

Check whether the handlebar is firmly seated in the stem by trying to rotate the handlebar downwards. Verify whether the handlebar/stem-combination can be turned relative to the fork. Do this by taking the front wheel between your knees and trying to turn the handlebar (h). If there is movement, carefully tighten the bolts a little more and check the proper fit again.

Tighten carefully by approaching the prescribed maximum torque value in small steps (0.5 Nm increments) and check in between the proper fit of the component. Do not exceed the maximum torque value indicated by the manufacturer! You find the torque values on the components themselves, in the chapter **"Recommended Torque Values"** or in the possibly enclosed instructions of the component manufacturers. Alternatively, you find them in the download area on the websites of the respective component manufacturers.



⚠ WARNING

These routines require a certain amount of manual skill and (special) tools and are best left to your Raymon dealer. If you nevertheless want to try it by yourself, read the operating instructions of the stem manufacturer carefully before you start.

In the case of turned stems, the cables may be too short. Riding with too short cables is dangerous. Ask your Raymon dealer for help.

Stems are available in different lengths (a), shaft and binder tube diameters. A stem of inappropriate dimension can become a source of danger: Handlebars or stems can break, resulting in an accident. When replacing any parts, be sure to only use suitable original spare parts that bear the appropriate mark. Your Raymon dealer will be pleased to help you.

NOTICE

When removing spacers the fork steerer tube must be shortened. This procedure is irreversible. The shortening should be carried out by you Raymon dealer, but only after you have found your preferred position.

Adjusting the Tilt of Handlebar and Brake Lever/Shifter Units

The straight extensions below the drops should be parallel to the ground or point slightly downwards towards the rear (b). The ends of the brake lever/shifter units should meet an imaginary extension of the bottom line of the drops. Shifting the brake levers/shifters is a job best left to your Raymon dealer, as it involves retaping the handlebar afterwards.

To adjust the tilt of the handlebar, release the Allen bolt(s) on the underside or front side of the stem. Turn the handlebar to the desired position. Make sure the handlebar is accurately centred in the stem (c). Carefully retighten the bolt(s) in a cross pattern by using the torque wrench. Make sure the upper and lower clamping slots of the stem are parallel and identical in width. Tighten the bolt(s) evenly in a cross pattern by using a torque wrench and observe the recommended torque values (d).



Once clamped in the stem try rotating the handlebar and tighten the bolt a little more, if necessary. Use a torque wrench and do not exceed the maximum torque value indicated by the manufacturer! You find the torque values on the components themselves, in the chapter **"Recommended Torque Values"** or in the possibly enclosed instructions of the component manufacturers. Alternatively, you find them in the download area on the websites of the respective component manufacturers.

⚠ WARNING

Note that the bolted connections of the stem (e), handlebar and brakes have to be tightened to the prescribed torque values. Use a torque wrench and do not exceed the maximum torque value indicated by the manufacturer! You find the torque values on the components themselves, in the chapter "Recommended Torque Values" or in the possibly enclosed instructions of the component manufacturers. Alternatively, you find them in the download area on the websites of the respective component manufacturers.

Be aware that the distance you need to stop your Raymon bicycle increases, when you are riding with your hands on aerobars (f). The brake levers are not in all gripping positions within easy reach.



Adjusting the Brake Lever Reach

Riders with small hands should, in particular, ask their Raymon dealer to adjust the brake lever position where the brake starts to be effective to the length of the rider's fingers directly after purchase.

In the case of some models of various manufacturers brake lever/shifter spacers allow an adjustment to your needs (g). In the case of the other models the brake cables are clamped according to your wishes at the brake bodies. Adjusting bolts located in this area only serve to compensate brake pad wear. Have the lever reach adjusted and make sure the first phalanx of the index finger reaches around the brake lever/shifter (h). Check the proper adjustment and functioning of the brake system subsequently, as described in chapter **"Brake System"** and/or in the brake manufacturer's instructions.

⚠ WARNING

Make sure you cannot pull the brake levers all the way to the handlebar. Your maximum braking force should be reached short of this point.

SAFETY INSTRUCTIONS

There are brake levers/shifters from Shimano that are suitable for small hands. If you have any problems with the brake lever reach, contact your Raymon dealer.

Correcting the Fore-to-Aft Position and Tilt of the Saddle

The position of the saddle is essential for your ride and for painless riding.

The distance between the handlebar grips and the saddle has an effect on the inclination of your upper body (a) and hence on your riding comfort and riding dynamics. This distance can be modified to a small extent by changing the position of the saddle rails in the seat post. However, moving the saddle rails in the seat post also influences pedalling. The rider pedals more or less from the back.

If the saddle is not in horizontal position, the rider cannot pedal in a relaxed manner. He must constantly support himself or hold on the handlebar to avoid sliding off the saddle.

Make sure that the seat of the saddle remains horizontal (b) as you retighten the bolt(s). The Raymon bicycle should stand on level ground while you adjust the saddle.

The adjustment range of the saddle is very small. With adjustable stems or stems at different lengths you can realise more important adjustments in length. In parts, you can realise a difference of more than 10 cm. In most of the cases you also have to adjust the Bowden and brake cables; a job best left to your Raymon dealer!

After the mounting check whether the re-tightened saddle tilts (c) or can be twisted (d) when you alternately apply load with your hands on the nose and the end of the saddle.

⚠ WARNING

There bolts of the saddle clamp are among the most sensitive ones on the entire Raymon bicycle. Therefore, make absolutely sure that you do not fall below the recommended minimum torque value and do not exceed the recommended maximum torque value and always use a torque wrench.

You find the torque values on the components themselves, in the chapter "Recommended Torque Values" or in the possibly enclosed instructions of the component manufacturers. Alternatively, you find them in the download area on the websites of the respective component manufacturers.



⚠ WARNING

Make sure the saddle rails are only clamped within the range of the marking (e). Otherwise the saddle rails can fail!

If the saddle rails do not fit, do not try to force them into the clamp grooves of the seat post. The clamp device or the saddle rails could break. Use another saddle model instead or ask your Raymon dealer.

Poorly tightened or loosening bolts can fail. Check the bolts once a month by using a torque wrench (f) according to the values indicated on the components themselves (g), in the chapter "Recommended Torque Values" or in the possibly enclosed instructions of the component manufacturers.

SAFETY INSTRUCTIONS

The saddle and/or seat post manufacturers possibly supply their products with detailed instructions. Read them carefully before adjusting the position of your saddle. If you are not absolutely sure or have any questions, contact your Raymon dealer.



Patent Clamp with one or two Parallel Bolts

In the case of patent seat posts one (a) or two (b) central Allen bolts hold the head that fixes both the tilt and the horizontal position of the saddle. Most seat posts have two bolts side by side.

To adjust the saddle position undo the bolt (c) or the bolts (d) at the seat post head. To do so loosen both bolt(s) two to three turns at the most, otherwise there is a risk that the entire mechanism will fall apart. Move the saddle horizontally to adjust the fore-to-aft position. Often you have to give the saddle a light tap to move it. Observe the marking on the saddle rails and do not go beyond (e+f).

After you have found the desired position, check that both halves of the clamp mechanism fit snugly around the saddle rails.

Make sure that the saddle or the clamp mechanism engages in one of the serrations on the seat post head while you start to tighten. Tighten the bolt(s) step by step.

If everything fits turn the bolt (g) or the bolts (h) by using a torque wrench according to the instructions of the manufacturer.

SAFETY INSTRUCTIONS

Also read the general part at the beginning of the chapter.



Yoke Clamp with two Bolts in Line

In the case of seat posts with yoke clamp (i) two vertical Allen bolts hold the head that fixes both the tilt as well as the horizontal position of the saddle. One bolt is behind the seat post, another one in front of it or in the centre (k) of the seat post.

To adjust the saddle position undo both bolts two to three turns at the most (l+m), otherwise there is a risk that the entire mechanism will fall apart. Move the saddle horizontally to adjust the fore-to-aft position. Often you have to give the saddle a light tap to move it. Observe the marking on the saddle rails (n) and do not go beyond. After you have found the desired position, check that both halves of the clamp mechanism fit snugly around the saddle rails.

Tighten both bolts evenly so that the saddle remains at the same angle. If you wish to lower the saddle nose a little, turn the front bolt clockwise. If necessary, you even have to loosen the rear bolt a little. To lower the rear part of the saddle, the rear bolt has to be turned clockwise and the front bolt to be loosened, if necessary.

If everything fits turn the bolts by using a torque wrench according to the instructions of the manufacturers (o+p).

SAFETY INSTRUCTIONS

Also read the general part at the beginning of the chapter.



Single or Two Bolt System (Horizontal)

In the case of seat posts with horizontal clamp one (a) or two (b) Allen bolts hold the head that fixes both the tilt and the horizontal position of the saddle.

To adjust the saddle position undo the transverse fixing bolt (c) or bolts (d) one to two turns at the most, otherwise there is a risk that the entire mechanism will fall apart.

Move the saddle horizontally to adjust the fore-to-aft position. Often you have to give the saddle a light tap to move it. Observe the marking (e+f) on the saddle rails and do not go beyond. Bring the saddle now in the desired position. Tighten the bolt(s) step by step.

If it is necessary to dismantle the clamping device, unscrew the fixing bolt(s) completely. This will release the outer clamp pieces. The inner clamp pieces may remain in their position due to a rubber fixing. Mount the saddle rails into the inner clamp pieces, add the outer pieces and re-insert the fixing bolt(s).



If the saddle fits slide it into the desired position, as above described. Check that the clamping device is still positioned exactly on the seat post head and that the saddle rails fit snugly in both halves of the clamping mechanism. Tighten the bolt(s) step by step.

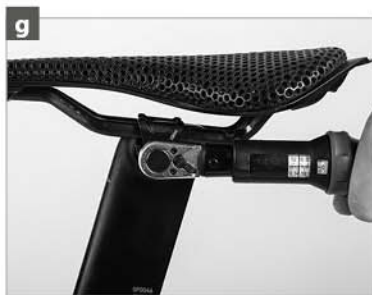
If everything fits turn the bolt (g) or the bolts (h+i) by using a torque wrench according to the instructions of the manufacturer.

⚠ WARNING

For most of the sports saddles the seat post is usually designed for a saddle rail diameter of 7 mm. Replacement outer clamps for ovalized saddle rails sized 8 mm x 8.5 mm (W x H) as well as for carbon saddle rails sized larger than 8 x 8.5 mm are also available. If you are not sure which type of saddle rail you have or if you need further information, contact your Raymon dealer.

SAFETY INSTRUCTIONS

Also read the general part at the beginning of the chapter.



CARBON – IMPORTANT INFORMATION

Special characteristics of carbon components made of carbon-fibre-reinforced plastics (e+f), also referred to as carbon or CRP, need to be taken into account.

Carbon is an extremely strong material which allows producing components of high strength and low weight. When used in a typical and reasonable riding scenario in accordance with its respective category of use, the resistance it offers equals or even exceeds that of aluminium or steel. However, it should be noted that carbon, unlike metals, does not show visible deformation after undue stress, even as its internal fibre structure may already be damaged.

In further use, a carbon component that was damaged previously in an overload event may fail just like a component made of metal would, potentially resulting in an accident with unforeseeable consequences. If your carbon component was exposed to a high load, we strongly recommend that you take the component, or ideally even your complete Raymon bicycle, to your Raymon dealer for inspection. They will check the damaged Raymon bicycle and replace defective components as necessary.

For safety reasons, damaged components made of carbon must never be repaired. They must be replaced at once! Prevent further use by

taking appropriate measures, i.e. saw the component into pieces. Damaged bicycle frames only may be repaired.

Components made of carbon must never and under no circumstances be exposed to excessive heat. Therefore, never have a carbon component enamelled or powder-coated. The temperatures required for enamelling or powder-coating could destroy the component. Do not leave carbon fibre components near a source of heat or in a car or boot during hot or sunny weather.

Carbon components have, like all lightweight bike components, a limited service life. For this reason, change stem and handlebar at regular intervals (e.g. every 3 years), even if they have not experienced any undue stress, such as an accident.

When you intend to transport your Raymon bicycle or its carbon frame and components in the boot or on the back seat of your car (g), be sure to protect the Raymon bicycle or the carbon frame and components. Blankets, foam tubes or the like are a suitable padding to protect the sensitive material from damage.

Always park your Raymon bicycle carefully and make sure it does not topple over (h). Carbon frames and components may already sustain damage by simply toppling over and thereby hitting e.g. a sharp edge.



⚠ WARNING

If any notches, tears, deformations, dents or discolorations etc. are visible on your carbon component, or if it makes creaking or cracking noises, do not use the Raymon bicycle until the component has been replaced. If the component was subjected to a high load, an accident or heavy impact, have it replaced or examined by your Raymon dealer before using it again.

Only combine carbon handlebars with aerodynamic extensions, if the handlebars are approved for these extensions. If you are in doubt or if you have any questions, contact your Raymon dealer.

Make sure all carbon clamping areas are absolutely free of grease and other lubricants. Grease will penetrate the surface of the carbon material, thereby reducing the coefficient of friction. This will no longer provide reliable clamping within the prescribed torque values. Once greased carbon fibre components may never again be clamped reliably! Use a special carbon assembly paste (a) instead as offered by various manufacturers.

**⚠ WARNING**

Do not clamp a carbon frame or seat post in the holding jaws of a workstand! The components may sustain damage. Mount a sturdy (aluminium) seat post (b) instead and use it to clamp the frame, or choose a work stand that holds the frame at three points inside the frame triangle or which clamps the fork and bottom bracket shell.

Most clamps of bicycle carrier systems are potential sources of damage to large-diameter frame tubes! As a result thereof carbon frames can fail during use without previous warning. However, there are special-purpose models which are suitable, available in the car accessory trade (c). Inform yourself there or ask your Raymon dealer for advice.

Do not sit on the top tube of your carbon frame, when you take a rest or stop your bike for example at traffic lights. The frame may sustain damage.

NOTICE

Protect the exposed areas of your carbon frame (e.g. the underside of the down tube) against rubbing cables or stone chips with special pads (d) your Raymon dealer keeps for sale.



BRAKE SYSTEM

General Information on Brakes

Brakes (e+f) are used for adjusting one's speed to the surrounding terrain and traffic. In an emergency situation, the brakes must bring the Raymon bicycle to a halt as quickly as possible.

In the event of such emergency braking, the rider's weight shifts forward abruptly, thus reducing the load on the rear wheel. The rate of deceleration is primarily limited by the danger of the rear wheel losing contact with the ground resulting in an overturning of the Raymon bicycle (g) and secondly by the tyres' grip on the road. This problem becomes particularly acute when riding downhill. Therefore, in case of an emergency braking situation you must try to put your weight back and down as far as possible.

Actuate both brakes simultaneously (h) and bear in mind that, due to the weight transfer, the front brakes can generate a far better braking effect on a surface with good grip. Wet weather reduces the braking power. Actuate the brakes carefully when riding on wet or slippery ground, as the tyres can easily slip away. Therefore, reduce your speed when riding in such conditions.

There are various types of brake systems that may be subject to the following problems:

Prolonged braking or permanent dragging of brake pads can lead to overheating of the rims in the case of **rim brakes**. This can damage the inner tube or make the tyre slip on the rim causing a sudden loss of air which could lead to a serious accident in the process.

Rims also wear down over time. They are even likely to burst. Therefore, they have to be replaced from time to time.



In the case of **disc brakes** (a+b) prolonged braking or permanent dragging of brake pads can also lead to an overheating of the brake system. This can result in a reduction of the braking force or brake failure. **Risk of accident!**

⚠ WARNING

The assignment of brake lever to brake calliper (c) can vary, e.g. left lever acts on front brake. Ask your Raymon dealer to change the brakes as you want them.

Make yourself carefully familiar with your brakes. Practise emergency stops in a place clear of traffic until you are comfortable controlling your Raymon bicycle. This can save you from having accidents.

Wet weather reduces the braking effect and the road grip of the tyres. Be aware of longer stopping distances when riding in the rain, reduce your speed and actuate the brakes carefully.

Ensure that braking surfaces and brake pads are absolutely free of wax, grease and oil. Risk of accident!

SAFETY INSTRUCTIONS

When replacing any parts, be sure to only use suitable original spare parts that bear the appropriate mark (d). Your Raymon dealer will be pleased to help you.

Be sure to obtain the relevant operating instructions from the brake manufacturer so that you can adjust the brake yourself if necessary. After each adjustment, practise braking in a place free of traffic to get used to it.



Rim Brakes

Racing/Side-Pull Brakes

Operation and Wear

Actuating the levers on the handlebar (e) and cables (f) causes a brake pad (g) to be pressed against a brake surface. The friction produced slows down the wheel. If water, dirt or oil come into contact with one of the braking surfaces, this changes the coefficient of friction and deceleration is reduced. This is why brakes respond with a slight delay and less powerfully in wet weather.

In order to maintain their effectiveness, brakes need to be checked and readjusted regularly.

The friction generated by braking causes wear to the brake pads as well as to the rims. Frequent rides in the rain and dirt and over hilly terrain can accelerate wear on both braking surfaces. Some rims are provided with wear indicators, e.g. grooves or circular indentations. If the rim is worn down to the point where the grooves or indentations are no longer visible, they need to be replaced. Once the abrasion of the rim has reached a certain critical point, the rim may break under the tyre pressure. This can make the wheel jam or the inner tube burst, both of which can cause an accident!

Functional Check

Check whether the brake pads are accurately aligned with the rims and still sufficiently thick. You can judge the wear of the brake pads by the appearance of grooves. If the pads are worn down to the bottom of the grooves (h), it is time to replace them. Be sure to observe the according instructions of the respective manufacturers.

See your Raymon dealer and ask them to examine the remaining thickness of the rims when you have worn through your second set of brake pads at the latest. Your Raymon dealer has special measuring devices for determining the remaining thickness of the rims.

Both brake arms must hit the rim simultaneously, when you actuate the brake lever. They must keep off the tyre.

The brake lever must always remain clear of the handlebar. You should not even be able to pull them all the way to the handlebar in the event of an emergency stop. If this is the case, however, observe the following chapter **"Synchronising and Readjusting"**.

Only a successful passing of all these points will ensure a correctly adjusted brake.



⚠ WARNING

Brake cables that are damaged (a), e.g. frayed, must be replaced immediately, as they can otherwise fail in a critical moment, possibly causing a fall!

Adjusting the position of the brake pads relative to the rims requires a considerable degree of skill. Replacing and adjusting the brake pads is a job best left to your Raymon dealer.

Have your rims regularly inspected and measured by the Raymon dealer (b).

Synchronising and Readjusting Dual Pivot Brakes

In the case of dual pivot brakes turn the screw located on the side (c) or above and a little on the side until the gap between brake pad and rim is equal on either side.

Also check whether the bolt by which the brake is screwed to the frame is still tightened to the proper torque, i.e. according to the torque value given in chapter **"Recommended Torque Values"**.

The position of the brake lever where the brake starts to act, also referred to as pressure point, can be adjusted to the size of the hand as well as to individual convenience by readjusting the brake cable. Make absolutely sure you cannot pull the brake lever all the way to the handlebar grip. With an unapplied brake the brake pads should not be too close to the rim sides, otherwise they could drag along the rim during riding. Before making this adjustment, observe the notes in chapter **"Adjusting the Brake Lever Reach"**.

With ongoing brake pad wear, the pressure point at the brake lever moves towards the handlebar. Check the free travel at regular intervals; it should not be longer than a quarter of the whole travel. For re-adjustment turn the knurled nut or bolt (d) through which the cable runs into the brake body until the lever has the desired travel. Test the brakes subsequently in a place free of traffic.

⚠ WARNING

Always test the brakes' function at standstill after adjusting them, making sure the brake pads engage fully with the rim without touching the tyre when you pull them hard. Make sure you cannot pull the lever all the way to the handlebar.



Cross/Cantilever Brakes

Raymon cyclocross bicycles have cantilever brakes (e) that provide wider clearance for muddy tyres and that are equipped with additional brake levers also allowing braking from the upper part of the handlebar (f).

Operation and Wear

Cantilever brake designs have two brake arms mounted separately on either side of the rim. When actuating the brake lever, both arms are pressed together by the cable, the pads touching the rim. The friction produced slows down the wheel. If water, dirt or oil come into contact with one of the braking surfaces, this changes the coefficient of friction and deceleration is reduced. This is why brakes respond with a slight delay and less powerfully in wet weather. In order to maintain their effectiveness, brakes need to be checked and readjusted regularly (g).

The friction generated by braking causes wear to the brake pads as well as to the rims. Frequent rides in the rain and dirt and over hilly terrain can accelerate wear on both braking surfaces. Some rims are provided with wear indicators, e.g. grooves or circular indentations. If the rim is worn down to the point where the grooves or indentations are no longer visible, they need to be replaced. Once the abrasion of the rim has reached a certain critical point, the rim may break under the tyre pressure. This can make the wheel jam or the inner tube burst, both of which can cause an accident!

Functional Check

Check whether the brake pads are accurately aligned with the rims and still sufficiently thick. You can judge the wear of the brake pads by the appearance of grooves. If the pads are worn down to the bottom of the grooves, it is time to replace them. Be sure to observe the according instructions of the respective manufacturers.

See your Raymon dealer and ask them to examine the remaining thickness of the rims when you have worn through your second set of brake pads at the latest. Your Raymon dealer has special measuring devices for determining the remaining thickness of the rims. The brake pads must hit the rim simultaneously, first touching it with the front portion of their surface. At the moment of first contact the rear part of the pads should be a millimetre away from the braking surface. Viewed from the top the brake pads form a "V" with the trough pointing to the front (h). This setting is to prevent the brake pads from screeching when applied.

The brake lever must always remain clear of the handlebar. You should not even be able to pull them all the way to the handlebar in the event of an emergency stop. If this is the case, however, observe the following chapter **"Synchronising and Readjusting"**.

Only a successful passing of all these points will ensure a correctly adjusted brake.



⚠ WARNING

Brake cables which are damaged, e.g. frayed, must be replaced immediately, as they can otherwise fail in a critical moment, possibly causing a fall!

Adjusting the position of the brake pads relative to the rims requires a considerable degree of skill. Replacing and adjusting the brake pads is a job best left to your Raymon dealer.

Have your rims regularly checked and measured by the Raymon dealer.

Synchronising and Readjusting

Almost all brake designs have a bolt located next to one or both brake callipers for adjusting the spring preload (a). Turn the bolt slowly and watch how the gap changes between brake pads and rim.

Adjust the spring in a way that with an unapplied brake the gaps are equal on either side and the brake pads touch the rim simultaneously during braking.

The position of the brake lever where the brake starts to act, also referred to as pressure point, can be adjusted to the size of the hand as well as to individual convenience by readjusting the brake cable.

Make absolutely sure you cannot pull the brake lever all the way to the handlebar grip. With an unapplied brake the brake pads should not be too close to the rim sides, otherwise they could drag along the rim during riding. Before making this adjustment, observe the notes in chapter “**Adjusting the Brake Lever Reach**”.

With ongoing brake pad wear, the pressure point at the brake lever moves towards the handlebar. Check the free travel at regular intervals; it should not be longer than a quarter of the whole travel. If necessary, readjust at the additional brake levers on the handlebar (b). Turn the adjusting bolt anticlockwise.

If no additional brake levers are installed, readjust at the cable stop at the fork or the frame. Release the lock nut and undo the slotted adjusting screw anticlockwise (c). If the free travel complies with your wishes, hold the adjusting screw tight and turn the lock nut against the cable stop until you feel a resistance.

⚠ WARNING

Always test the brakes' function when standing after adjusting them, making sure the brake pads engage fully with the rim when you pull them hard (d). Make sure you cannot pull the lever all the way to the handlebar.



Disc Brakes on Cyclocross and Road Racing Bicycles

Operation and Wear

The most striking feature of disc brakes is their outstanding braking effect. They respond a lot faster in wet conditions than rim brakes do and achieve their normal high braking power within a very short time. They require little maintenance and do not wear down the rims as rim brakes do.

Disc brakes (e+f) consist of the brake calliper (1), the brake disc/rotor (2), the brake hose or cable (3) as well as the brake grip/lever (g). Actuating the brake lever compresses the hydraulic pistons through hydraulic pressure or mechanically, pushing the brake pads against the rotor.

The friction generated by braking causes wear to the brake pads as well as to the rotors. Frequent rides in the rain and dirt and over hilly terrain can accelerate wear of the rotors. Depending on the manufacturer and the model there are different ways of checking the brake pads and rotors for their wear limits.

⚠ WARNING

- **New brake pads need a "break-in" period before they reach their optimal braking performance. For this purpose, accelerate the Raymon bicycle 30 to 50 times to around 30 km/h (18 mph) and bring it to a halt each time. This procedure is finished, when the force required at the lever for braking has stopped decreasing.**
- **Dirty brake pads and brake discs/rotors can lead to drastically reduced braking force. Therefore, make sure the brake remains free of oil and other fluids, especially when you clean your Raymon bicycle or grease the chain. Dirty brake pads can under no circumstances be cleaned, they must be replaced! Rotors can be cleaned with special brake cleaners and with a clean absorbing cloth or with warm water and mild soap (h).**

⚠ CAUTION

- **Disc brakes get hot in use. For this reason do not touch the rotors directly after stopping, especially after a long downhill ride.**



⚠ WARNING

Unusual noises (scratching, chafing etc.) during braking and/or a noticeable change of the braking force (stronger or weaker) are indications that the brake pads (a) are soiled or worn down. Check the brake pads and replace them, if necessary. Otherwise you risk further damage, e.g. to the rotor (b), or even an accident due to brake failure! If you are in doubt, contact your Raymon dealer.

SAFETY INSTRUCTIONS

When replacing any parts, be sure to only use parts that bear the appropriate mark and, to be on the safe side, original spare parts compatible with the brake.

Hydraulic Disc Brakes**Functional Check**

Regularly check the hoses and connections for leaks while pulling on the lever (c). In case of a brake liquid leakage, contact your Raymon dealer immediately. A leak in the brake lines can render the brake ineffective. **Risk of accident!**

Wear and Maintenance

Check the pads for wear at regular intervals (d) by following the service instructions of the respective manufacturer.

Measure the thickness of the brake pad on the mount by using a calliper gauge (e). The brake pad must all over be 0.5 mm thick at least. Measure the pad and the mount together as well as the mount alone; the difference is the thickness of the pad. Re-insert the cleaned brake pads into the cleaned calliper.



⚠ WARNING

Loose connections and leaky brake hoses drastically impair braking effect. Risk of accident! If you find leaks in the brake system or buckled hoses, contact your Raymon dealer immediately.

A heavily clogged brake can lead to squeaking noises during braking.

If your Raymon bicycle has hydraulic disc brakes, do not place it upside down (f) for repair purposes, i.e. handlebar and saddle on the ground. This would render the brake ineffective.

Pull the brake levers and secure them with a strong elastic band (g), when transporting a Raymon bicycle with hydraulic disc brakes upside down. This will prevent air from entering the system.

⚠ CAUTION

Do not open the brake hoses. Brake fluid that can be very unhealthy and damaging to the paint could leak out.

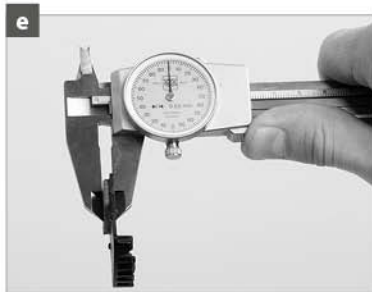
NOTICE

With the wheels dismounted, do not actuate the brake levers. This would cause the brake pads to be pushed together, making it difficult to remount the wheel. Mount the enclosed transport locks after dismounting the wheels (h).

SAFETY INSTRUCTIONS

If your brake system works with DOT brake fluid, the latter needs to be replaced regularly according to the intervals prescribed by the manufacturer.

The manufacturers of hydraulic disc brakes usually deliver their products with detailed instructions. Be sure to read them carefully before removing a wheel or doing any maintenance work.



Mechanical Disc Brakes

Functional Check

The more brake pads of mechanical disc brakes wear down, the longer is the brake lever travel. Regularly check whether you get a positive braking response before the lever touches the handlebar. Make sure the brake cables are in sound condition!

⚠ WARNING

Damaged cables (a) should be replaced immediately, as they can snap. Risk of accident!

Wear and Maintenance

To a certain extent, wear of the brake pads can be compensated directly at the brake calliper. Unscrew the knurled lock nut on the bolt through which the cable enters the brake calliper (b) and then unscrew the bolt until the lever has the desired travel. Retighten the lock nut by taking care that the slot of the bolt does not face upward or forward, as this would permit an unnecessarily high amount of water or dirt to enter.

Now check the functioning of the brake and make sure the brake pads do not drag on the brake disc/rotor (c) when you release the brake lever and let the wheel spin.

Repeated readjustment at the brake lever makes the arm on the brake calliper change its position. This can reduce braking power and result in a complete brake failure in an extreme case. **Risk of accident!**

Some models offer further ways of adjusting the brakes directly at the brake calliper, though this requires a certain amount of skill. In any case, be sure to read the original instructions of the brake manufacturer before adjusting the brakes. If you are in doubt or if you have any questions, contact your Raymon dealer.

⚠ WARNING

Repeated readjustment at the brake lever or at the cable on the brake calliper can drastically reduce the maximum braking effect.

SAFETY INSTRUCTIONS

Some systems must be readjusted directly at the brake calliper to compensate wear (d). For more information read the enclosed manual of the brake manufacturer.

The manufacturers of mechanical disc brakes usually deliver their products with detailed instructions. Be sure to read them carefully before removing a wheel or doing any maintenance work.



GEARS

Deraillleur Gears

The gears (e) of your Raymon bicycle serve to adjust the gear ratio to the terrain you are riding on and the desired speed.

A low gear (where in the case of deraillleur gears the chain runs on the small chainring and a large sprocket) allows you to climb steep hills with moderate pedalling force. You must, however, pedal at a faster pace. High gears (large chainring, small sprocket) are for riding downhill. Every turn of the pedals takes you many metres forward at correspondingly high speed.

On level ground your pedalling speed, also referred to as cadence, should be higher than 60 strokes a minute. Racing cyclists pedal at a rate between 90 and 110 strokes a minute on level ground. When climbing uphill, your cadence will naturally fall off somewhat. Your pedalling should, however, always continue to flow.



Operation and Control

Deraillleur gears always work according to the following principle:

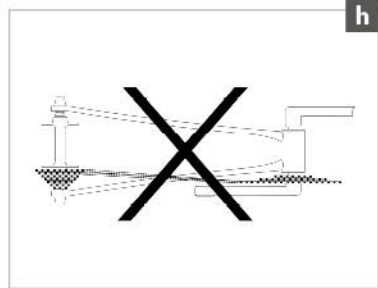
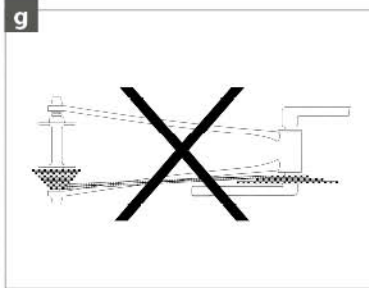
Large front chainring – high/heavy gear – bigger gear ratio
 Small front chainring – low/easy gear – smaller gear ratio
 Large rear sprocket – low/easy gear – smaller gear ratio
 Small rear sprocket – high/heavy gear – bigger gear ratio

Normally, the shifters are mounted as follows:

Shift lever right – rear sprockets
 Shift lever left – front chainrings

There are meanwhile various gear systems with one, two or three front chainrings.

Modern Raymon road racing bicycles can have up to 33 gears (f). As there are, however, overlapping ranges, actually 15 to 18 gears are usable. It is not advisable to use gears with the chain running at an extreme angle, as this reduces power transmission efficiency and hastens wear of the chain. An unfavourable run of the chain is when the smallest chainring is used with one of the two or three outermost (smallest) sprockets (g) or when the largest chainring is used with one of the inmost (largest) sprockets (h).



The bottom bracket (a) is the interface between cranks and frame. There are different designs, in some cases the bearing shaft is part of the bottom bracket, in some other cases it is integrated into the right crank. Sealed bottom brackets are maintenance free and delivered without play ex works. The bottom bracket in the frame and the cranks on the shaft must be checked for play at regular intervals.

Also check at regular intervals whether the cranks are firmly attached to the bearing shaft or whether there is play. Grab the crank and try to jiggle it forcefully. It must be absolutely free of play. If you notice any play, contact your Raymon dealer immediately.

Depending on the gear system, gear shifting is initiated by actuating a brake lever/shifter unit or by a shifter in the case of flatbars (b). Continue pedalling during gear shifting, however, at reduced pedalling force.

Further below you find the most common brake levers/shifter units and their operation. It is, however, also possible that your new Raymon bicycle has a gear system that is not listed below.

In the case of **Campagnolo Ergopower** (c) you shift with the shifter located behind the brake lever to the larger chainrings or sprockets by moving it with the index or middle finger inwards.

By pressing with the thumb on the shifter inside the unit the chain moves on the smaller chainrings or sprockets. By pressing the shifter once you can shift up to two chainrings or three sprockets at a time.

In the case of **Shimano Dual Control** (d) brake lever/shifter units you shift to the larger chainrings or sprockets by moving the entire brake lever inwards. You can shift up to two chainrings or three sprockets per gear shift stroke. By moving inward only the small lever located behind the brake lever the chain moves on the smaller chainrings or sprockets. You can shift only one chainring/sprocket per stroke.

The **Di2** is the electronic version of the high-quality drive groups from **Shimano**. Instead of cables the signal is transmitted by wires. The rear and the front derailleurs are moved by small electrical motors. The power supply is provided by a rechargeable battery that is mounted to the frame.



The shifters are positioned and actuated like the mechanical gears: With a Di2 you only have to press control buttons, instead of pressing the entire brake lever or the lever positioned behind inward as is the case with usual dual control shifters from Shimano.

Shift to the larger sprockets by pressing the long control button on the side of the brake lever. When you press the triangular control button that is behind the brake lever (e) the chain moves onto the smaller cogwheels.

For more information on adjustment and maintenance of the Di2 visit the website www.shimano.com

SRAM Force brake levers/shifters (f) have only one shifter that is located behind the brake lever. With one complete sweep of the shifter, the rear derailleur shifts in a higher gear by one to two chainrings or three sprockets. With a short sweep the chain changes to the next smaller chainring or sprocket.

In the case of the **Shimano**, **SRAM** and **Campagnolo bar end shifters** for triathlon and time trial use (g) you must press down the shifter to shift to the smaller sprockets, i.e. to a high gear ratio, and to the smaller chainrings, i.e. to a lower gear ratio. By pulling the shifter upwards you can shift to the larger chainrings or sprockets.

The **shift levers for flat bars** are located underneath the handlebar (h). The right-hand, big shifter is actuated with the thumb. The chain moves on larger sprockets, i.e. to lower gears. The smaller shifter is actuated either with the index finger or with the thumb and shifts into the other direction. By actuating the big shifter with the thumb on the left side you shift to the larger chainring, i.e. to a higher gear ratio.



⚠ WARNING

Always wear straight-cut trousers or use trouser clips or the like to make sure your trousers do not get caught in the chain or the chainrings. Risk of accident!

Shifting gears under load, i.e. while pedalling hard, can make the chain slip. At the front derailleur the chain may even slip off the chainrings and result in an accident! At least the service life of the chain will be shortened considerably.

Practise switching gears in a place free of traffic until you are familiar with the functioning of the brake lever/shifter units or the shifters of your Raymon bicycle.

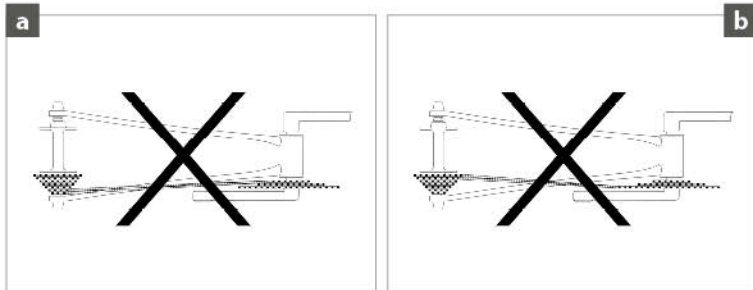
NOTICE

If there is play between bearing shaft and cranks, they can sustain damage. Risk of breakage!

Avoid gears with the chain running at an extreme angle (a+b), as this will increase wear!

SAFETY INSTRUCTIONS

The gear manufacturers usually deliver their products with detailed manuals. Read them thoroughly. Make yourself familiar with your new gears, if necessary, in an area free of traffic. If you are in doubt or if you have any questions, contact your Raymon dealer.

**Checking and Readjusting**

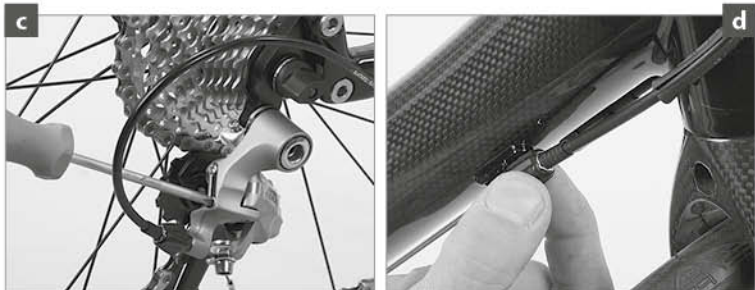
The derailleur gears of your Raymon bicycle were carefully adjusted by your Raymon dealer before delivery. However, Bowden cables may stretch a little on the first kilometres/miles, making gear shifting imprecise and the chain rattle.

Adjusting the front and rear derailleur (c) accurately is a job for an experienced mechanic. If you want to try it by yourself, observe the gear manufacturer's operating instructions. If you have any problems with the gears, contact your Raymon dealer.

⚠ WARNING

For your own safety, bring your category 2 "Sports" Raymon bicycle to your Raymon dealer for its first inspection after 100 to 300 kilometres (60 to 180 miles), 4 to 12 hours of initial use or four to six weeks, at the very latest, however, after three months.

For your own safety, bring your category 1 (ASTM) / 6 (EN) Raymon bicycle to your Raymon dealer for its first inspection after 300 to 450 kilometres (180 to 270 miles), 10 to 15 hours of initial use or four to six weeks, at the very latest, however, after three months.



Adjusting the Rear Derailleur

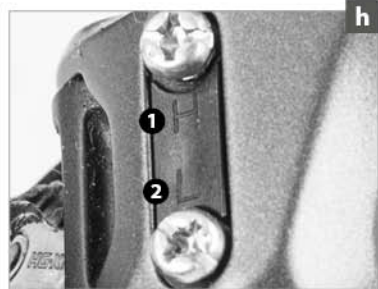
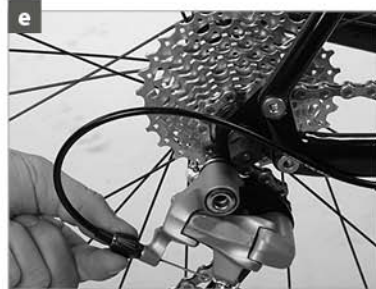
Increase the tension of the Bowden cable by turning the adjustable downtube cable stop (d) or the adjusting bolt through which it runs into the rear derailleur (e). To do so, shift to the smallest sprocket and turn the bolts anticlockwise in half turns until the cable is slightly tensioned.

After tensioning the Bowden cable check whether the chain immediately climbs onto the next larger sprocket. To find out you either have to turn the cranks by hand or ride the Raymon bicycle and shift through the gears.

If the chain easily climbs onto the next larger sprocket, check whether it just as easily shifts to the small sprockets. If it does not, release the respective adjusting bolt a little. You may need several tries.

⚠ WARNING

Adjusting the front and rear derailleur accurately is a job for an experienced mechanic. Observe the instructions of the gear manufacturer. If you have any problems with the gears, contact your Raymon dealer.



SAFETY INSTRUCTIONS

Ask a helper to lift the rear wheel. By turning the cranks and shifting through you can easily check the function.

Adjusting the Limit Stops

The rear derailleur is equipped with limit screws (g) which limit the movement range of the derailleur, thus preventing the derailleur and chain from colliding with the spokes or the chain from dropping off the smallest sprocket. The limit screws are adjusted by your Raymon dealer. They do not alter their position during normal use.

If your Raymon road racing bicycle fell over to the chain side or if you mount another wheel, it is imperative that you check the limit stops.

Shift with the right shift lever to the highest gear. The inner cable is relaxed and the chain running on the smallest sprocket (f). Look from the rear of the Raymon bicycle at the cassette and check whether the teeth of the smallest sprocket and the teeth of the top guide pulley are all in a perfectly vertical line. If necessary, correct the position by means of the limit screws (g). The limit screws on rear derailleurs are often marked "H" (1) for high gear and "L" (2) for low gear (h). High gear means that the chain is running on the smallest sprocket.

If the screws are not marked, you will have to find out by trial and error. Turn one of the screws (a) by counting the number of turns and watch the rear derailleur. If it does not move, you are turning the wrong one. Turn back the counted rotations to find its original position.

Turn the screw clockwise to move the rear derailleur towards the wheel and anticlockwise to move it away from the wheel.

Shift to the largest (inmost) sprocket (b) and check whether the teeth of the sprocket and the teeth of the guide pulley are all in a perfectly vertical line. Turn the limit screw marked "L" clockwise until the rear derailleur stops moving towards the spokes and can neither be moved by actuating the shift lever nor by pushing it with your hand (c).

This adjustment prevents the chain from getting stuck between sprocket and spokes or the rear derailleur or the derailleur cage from touching the spokes, which could result in damage to the spokes, the rear derailleur and the frame. In the worst case, it could be impossible to continue cycling.



⚠ WARNING

- Do a test ride in a place free of traffic, after adjusting the gears of your Raymon bicycle.
- If your Raymon bicycle has tipped over or the rear derailleur received a blow (d), the rear derailleur or its mount, also referred to as derailleur hanger, might be bent. It is advisable to check its range of movement and readjust the limit screws, if necessary, after such an incident or after mounting a new rear wheel on your bike.

NOTICE

- Poorly adjusted gears are one of the main causes for irreparable damage to frame, rear derailleur and wheels.

SAFETY INSTRUCTIONS

- Have your Raymon bicycle checked by your Raymon dealer at regular intervals.

Adjusting the Front Derailleur

The range within which the (e) front derailleur keeps the chain on the chainring without itself touching the chain is very small. The swivelling range is reduced in the same way as with the rear derailleur, i.e. by turning the limit screws marked "H" and "L" (f).

First, shift the gear to the large chainring and the smallest sprocket. Turn in the outer limit screw ("H") exactly to the point where the chain does not touch the front derailleur, even under heavy load. And only at the point where the chain does not move any more from the middle to the large chainring, the limit screw can be released a little.

Continue by shifting to the smallest chainring (front) and the biggest sprocket (rear) (g). Turn in the inner limit screw ("L") exactly to the point where the chain does not touch the front derailleur. And only at the point where the chain does not move any more from the middle to the small chainring, the limit screw can be released a little.

This adjustment prevents the chain from falling off, which would suddenly interrupt the drive involving the risk of an accident. In cases of doubt this adjustment is a job best left to your Raymon dealer.

As with the rear derailleur, the cable of the front derailleur is subject to lengthening which leads to a reduced precision in gear changing. If necessary, shift to the small chainring and increase the tension of the Bowden cable by turning the adjusting bolt through which it passes at the entry to the downtube cable stop.

⚠ WARNING

- Always check after an accident whether the guide plates of the front derailleur are still parallel to the chainrings (h). Make sure they do not touch the large chainring which would block the drive. Risk of accident!
- Adjusting the front derailleur is a very delicate job. Improper adjustment can cause the chain to jump off, thus interrupting the driving force. This can cause a fall!
- Do a test ride in a place free of traffic, after adjusting the gears of your Raymon bicycle.



Adjusting the Chain Tension of Single Speed Bicycles

Operation and Control

So-called single speed bicycles have only one speed and therefore come along without rear and front derailleur (a). Furthermore, they do not always have a freewheel on the rear wheel, but a rigid hub ("fixie").

In the case of these models the cassette sprocket of the rear wheel is directly connected with the rear wheel. This makes the pedals move with every movement of the rear wheel – and vice versa. These bicycles have often only one brake, sometimes they even have no brake at all (b)! Track bicycles are typical examples of this design.

Checking and Readjusting

The chain tension of single speed bicycles has to be checked and adjusted, if necessary, after approx. 1,000 km (600 miles) or 50 hours of use.

Turn the crank backwards to find the position where the chain is tightest. You should retighten the chain when you can lift the chain in this position by clearly more than 1 cm in the middle between chainring and sprocket.

Release the rear wheel axle bolts or nuts with an appropriate tool (c). Adjust the chain tension by pulling the wheel to the rear or by releasing/tightening the chain tensioner. Subsequently, the crank must turn freely without resistance.

Adjust the rear wheel in the centre of the rear drop-outs (d) by using the chain tensioner as limit stop. Tighten the rear wheel axle nuts with a torque wrench.

⚠ WARNING

- **Note that the use of single speed bicycles with only one or without brake on public roads is not permitted according to the road traffic licensing regulation.**
- **Chain tensioners are only intended to tension the chain and to pre-adjust the rear wheel. They do not hold the wheel in position or prevent a slipping off. Therefore, the wheel nuts must be tightened with a torque wrench according to the indications.**
- **If the chain is considerably lengthened to various degrees over its circumference, it must be replaced.**



CHAIN – CARE AND WEAR

Regular and correct lubrication of your bicycle chain ensures enjoyable riding and prolongs its service life. It is not the quantity but the distribution and regular application of lubricant that counts. Clean the dirt and oil off your chain with an oily rag from time to time (e). Special degreasers are not necessary; they even have a damaging effect.

Having cleaned the chain as thoroughly as possible, apply chain oil, wax or grease to the chain links (f). To lubricate the chain, drip the lubricant onto the rollers of the lower run of the chain while you turn the crank. Once this is done, turn the cranks a few more times; then let the Raymon bicycle rest for a few minutes so that the lubricant can disperse. Finally wipe off excess lubricant with a rag so that it does not spatter around during riding or can collect road dirt.

⚠ WARNING

Make sure the braking surfaces of the rims, the brake discs/rotors and the brake pads remain clear of lubricants. This would render the brake ineffective.

NOTICE

For the sake of the environment, only use biodegradable lubricants. Bear in mind that some of the lubricant can end up on the ground, especially in wet conditions.



Although the chain is one of the wearable parts of the Raymon bicycle, there are still ways for you to prolong its life. Make sure the chain is lubricated regularly, especially after riding in the rain. Try to only use gears which run the chain in the straightest line between the sprockets and chainrings and get in the habit of high cadence pedalling.

Chains on bicycles with derailleur gears are worn out after approx. 1,000 to 2,500 km (600 to 1,500 miles) or 50 to 125 hours of use. Heavily stretched chains impair the operation of derailleur gears. Cycling with a worn-out chain also accelerates the wear of the sprockets and chainrings. Replacing these components is relatively expensive compared with the costs of a new chain. It is therefore advisable to check the condition of the chain at regular intervals. Your Raymon dealer has accurate measuring instruments for checking the chain wear (g). Replacing the chain should ideally be left to an expert, as this requires special tools. In addition, you need to select a chain matching your gear system.

⚠ WARNING

An improperly joined or heavily worn chain can break and cause an accident.

SAFETY INSTRUCTIONS

When replacing your chain, only use appropriate and suitable original spare parts (h). Your Raymon dealer will be pleased to help you.

WHEELS AND TYRE EQUIPMENT

The wheel consists of the hub, the spokes and the rim. In the case of **clinchers and folding tyres**, i.e. the most common system, the tyre is mounted onto the rim so that it encases the tube. There is a rim tape running around the rim well to protect the sensitive tube against the spoke nipples and the edges of the rim trough, which are often sharp (a). Another system comprises the **tubular tyres** which are glued on specific rims. A third system comprises **tubeless tyres** which also require specific rims.

Due to the rider's weight and the luggage as well as unevennesses in the field, the wheels are subjected to considerable load. Although wheels are manufactured with great care and delivered accurately trued, spokes and nipples can lose a little tension on the first kilometres/miles. Therefore, ask your Raymon dealer to check and true up the wheels after a short "break-in" period already, i.e. after about 100 to 300 kilometres/60 to 180 miles (category 2 "Sports") or 300 to 450 kilometres/180 to 270 miles (category 1 (ASTM) / 6 (EN)) or 4 to 12 hours of use (category 2 "Sports") or 10 to 15 hours of use (category 1 (ASTM) / 6 (EN)). After this "break-in" period, check the wheels regularly. It will, however, rarely be necessary to tighten the spokes (b).

⚠ WARNING

Keep in mind that aero wheels may be affected by side winds and drift!



NOTICE

Truing (retruing) wheels is a difficult job which you should definitely leave to a specialist.

Tyres, Inner Tubes, Rim Tape, Inflation Pressure

The tyres should provide grip and traction. At the same time they should run smooth and enhance the rider's comfort by absorbing small shocks. Both the rolling friction and the grip depend on the nature of the tyre carcass, the rubber compound and the tyre tread. Your Raymon dealer will be pleased to help you choose from the numerous types of tyres.

If you want to mount a new tyre, you need to mind the sizing system and the actual size of the old tyre. The latter is specified in two different units on the side of the tyre. One of the sizes is the standardised size in millimetres which is more precise, e.g. the number sequence 23-622 means that the tyre is 23 mm wide when fully inflated and has an inner tyre diameter of 622 millimetres. The other size is indicated in inches (e.g. 23 x 7/8 or 700 x 23c) (c).

Tyres must be inflated to the proper inflation pressure (d) to provide an optimal compromise between smooth running and riding comfort. Properly inflated tyres are also more resistant to punctures. An insufficiently inflated tyre can easily get pinched ("snakebite"), when it goes over a sharp kerb.

⚠ WARNING

Are the tyres in good condition and do they have sufficient pressure? A higher pressure gives a better riding stability and reduces the risk of a puncture. The minimum and maximum pressure (in bar or psi) is indicated on the tyre side.

The air pressure recommended by the manufacturer is given on the side of the tyre or on the type label (e). The lower of the two pressure specifications makes for better cushioning for lightweight riders and is therefore best for cycling on a rough surface. Rolling resistance on level ground decreases with growing pressure, but so does comfort. Highly inflated tyres are therefore most suitable for heavy riders and for riding on smooth asphalt.

Inflation pressure is often given in the old system of units, i.e. in psi (pounds per square inch). The table below gives the most common pressure values in terms of both systems (f).

Clincher and folding tyres and rim alone are not able to hold the air. Therefore, an inner tube has to be placed inside the tyre to retain the air pressure.

Exceptions to this are the tubeless tyres and tubular tyres. In the case of tubular tyres that must be glued on the rim the tube is already integrated into the tyre and can be neither removed, nor patched in

the case of a puncture. This type of tyre requires special rims without rim flanges. For more information read the respective instructions, if necessary, before starting any work with such kind of tyres.

Valves

There is only one valve type in general use on Raymon road racing bicycles: The **Sclaverand** or **Presta valve** that is designed to withstand extremely high pressures (g).

It has a plastic cap protecting the valve from dirt.

You first have to undo the small knurled nut a little and depress it carefully until air starts to escape (h). Check the nut is tightened and seated in its stem, otherwise air may slowly leak out. It can be hard to inflate tyres to the necessary pressure by using hand pumps. It is much easier with a foot-operated or a track pump equipped with a pressure gauge.

⚠ WARNING

Replace tyres with a worn tread or with brittle or frayed sides. Dampness and dirt penetrating the tyre can cause damage to its inner structure. The tube might burst. Risk of accident!



f

psi	bar	psi	bar	psi	bar
50	3.4	80	5.5	115	7.9
55	3.8	85	5.9	120	8.3
60	4.1	90	6.2	125	8.6
65	4.5	95	6.6	130	9.0
70	4.8	100	6.9	135	9.3
75	5.2	105	7.2	140	9.7
		110	7.6	145	10.0



⚠ WARNING

Tyres allowing an inflation pressure of 5 bars or more have to be mounted on hook bead rims, identifiable by the designation "C". If you are in doubt or if you have any questions, contact your Raymon dealer.

Mounting a new tyre of another size might possibly cause the tip of your shoe to touch the front wheel while steering. Risk of accident!

Treat your tyres with care. Never inflate your tyres beyond the maximum permissible pressure, otherwise they might burst or come off the rim during the ride. Risk of accident!

If you mount wheels with carbon rims (a) on your Raymon road racing bicycle, it may be possible that you have to change the brake pads, as conventional brake pads often do not provide the desired braking effect. Be sure to observe the instructions of the wheel manufacturer.

SAFETY INSTRUCTIONS

Always ride your bicycle with the prescribed tyre pressure and check the pressure at regular intervals, at least once a week (b).

Observe the maximum pressure value of the rim. The pressure is dependent on the tyre width. You will find the values in the enclosed instructions of the rim or wheel manufacturers.

**Rim Trueness and Spoke Tension**

For the true running of the wheel it is imperative that the tension exerted by the spokes is distributed evenly around the rim (c+d). If the tension of a single spoke changes, e.g. as a result of riding fast over a kerb or of a loose nipple, the tensile forces acting on the rim become unbalanced and the wheel will no longer run true. The functioning of your Raymon bicycle may even be impaired before you notice the wobbling appearance of a wheel that has gone out of true.

With rim brakes the sides of the rims also serve as braking surfaces. An untrue wheel can impair the braking effect. It is therefore advisable to check the wheels for trueness from time to time. For this purpose lift the wheel off the ground and spin it with your hand. Watch the gap between the rim and the brake pads. If the gap varies by more than a millimetre, you should ask a Raymon dealer to true up the wheel.

⚠ WARNING

Do not ride with untrue wheels. In the case of extreme side-to-side wobbles, the brake pads of rim brakes can miss the rim and get caught in the spokes! This normally instantly jams the wheel and throws you off your Raymon bicycle.

Loose spokes must be tightened at once. Otherwise the load on the other spokes and the rim will increase.

TYRE PUNCTURE

Flat tyres are the most common cause of puncture during cycling. However, as long as you have the necessary tools and a spare tube or a repair kit, this need not mean the end of your cycle ride. If your wheels are attached with quick-releases to the frame and the fork, you only need two tyre levers and a pump (e).

SAFETY INSTRUCTIONS

Before removing a wheel, read chapters "Wheel Mounting" and "How to Use Quick-Releases and Thru Axles". If you are in doubt or if you have any questions, contact your Raymon dealer.

Wheel Removal

Open the quick-release lever at the brake (**Shimano, SRAM**) (f) or shift the pin in the brake lever/shifter unit on the handlebar (**Campagnolo**) (g).

If your Raymon bicycle has **cantilever and V-brakes** you first have to unhook the brake cable from the brake arm. To do this, grip the rim with one hand and press the brake pads and/or arms together.

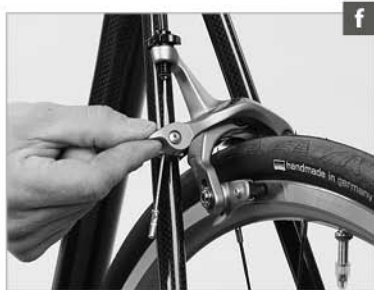
In this position the usually barrel shaped nipple of the lateral brake cable or the brake hose (of V-brakes) can easily be disengaged.

If you have **disc brakes**, you should first check the exact position and condition of the brake pads and/or wear indicators (ear or nose-shaped metal protrusions). In this way you will be able to tell after the removal whether the brake pads are still in their correct position. Read the brake manufacturer's operating instructions. Do not actuate the brake lever when the wheel is removed.

If you have **derailleur gears**, you should shift the chain to the smallest sprocket before removing the rear wheel. This shifts the rear derailleur right to the outside where it does not interfere with the removal of the wheel. Open the quick-release of the wheel, as described in chapter "How to Use Quick-Releases and Thru Axles".

If you cannot remove the wheel after releasing the nuts, this is due to the drop-out safety tabs. They are metal catches which engage with recesses in the drop-outs. Just release the quick-release adjusting nut a little and slip the wheel past the tabs.

You will find it easier to remove the rear wheel, when you pull the rear derailleur slightly backwards (h). Lift the bicycle off the ground and give the wheel a gentle tap with your hand so that it drops out.



⚠ WARNING

If your Raymon bicycle has hydraulic disc brakes, do not place it upside down for repair purposes, i.e. handlebar and saddle on the ground. This would render the brake ineffective.

⚠ CAUTION

Brake discs/rotors can become hot, so let them cool down before removing a wheel.

NOTICE

Do not pull the (disc) brake lever with a removed wheel and make sure to mount the safety locks when removing the wheel.

SAFETY INSTRUCTIONS

Read the operating instructions of the brake and the gear manufacturer.

Clincher and Folding Tyres

Tyre Removal

Remove the cap and the fastening nut off the valve and deflate the tyre completely (a). Press one tyre side from the rim sides towards the centre of the rim. This will ease the removal.

Apply a plastic tyre lever to one bead of the tyre about 5 cm beside the valve (b) and lever the tyre out of the rim in this area. Hold the tyre lever tight in its position. Slip the second tyre lever between rim and tyre at a distance of about ten centimetres on the other side of the valve and lever the next portion of the bead over the edge of the rim (c).

After levering a part of the tyre bead over the edge of the rim you should normally be able to slip off the whole tyre on one side by moving the tyre lever around the whole circumference. Now you can remove the inner tube (d). Make sure the valve does not get caught in the rim, as this can damage the inner tube. If necessary you can remove the whole tyre by pulling the other tyre bead off the rim. Repair the puncture according to the instructions of the repair kit manufacturer or replace the inner tube.



When you have removed the tyre, you should also check the rim tape (e). It should lie squarely in the rim trough, covering all spoke nipples, and should neither be damaged nor brittle. In the case of double wall rims the tape must cover the entire rim base, but it should not be so broad as to stand up along the inside edges of the rim trough. Rim tapes for this type of rim should only be made of fabric or durable plastic. If you are in doubt or if you have any questions, contact your Raymon dealer.

⚠ WARNING

If the fabric of the tyre is destroyed by the perforating object, replace the tyre to be on the safe side.

Replace spoilt rim tapes immediately.

NOTICE

If you get a puncture en route, inflate the inner tube and bring it close to your ear. In most cases you can hear the air coming out. At home you can help yourself with a bucket of water where you can locate the hole by the bubbles. When you have found the hole, look for the corresponding place on the tyre and check it. Remove the foreign body, otherwise another puncture can occur.

Tyre Mounting

When mounting a tyre make sure no foreign matter, such as dirt or sand, gets inside the tyre and you do not damage the inner tube in the process.

Slip one bead of the tyre onto the rim. Using your thumbs, press one bead over the edge of the rim and then around the entire circumference. This should normally be possible without using tools.

Stick the valve of the inner tube through the hole in the rim (f). Inflate the inner tube slightly so that it becomes round and push it into the tyre all the way round. Make sure not to leave any folds in the inner tube.

To finish mounting the tyre, start at the opposite side of the valve. Using your thumbs, press as much of the second bead of the tyre over the edge of the rim as you can (g).

Make sure the inner tube does not get pinched and squashed between the tyre and the rim. You can prevent this by pushing the inner tube into the hollow of the tyre with a finger as you work along (h).



Work the tyre into the rim by approaching the valve symmetrically from both sides. Towards the end, you will have to pull the tyre vigorously downwards (a) to make the already mounted portion of the tyre slip towards the deepest part of the rim well. This will ease the job noticeably on the last centimetres.

Before fitting the tyre completely on the rim check again whether the inner tube lies properly inside the tyre and press the last stretch of tyre over the edge of the rim using the balls of your thumbs.

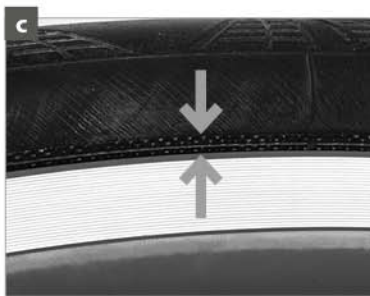
If this does not work, you will have to use the tyre levers (b). Make sure the bent ends point towards the inner tube and the inner tube does not get damaged.

Push the valve a little into the tyre so that the inner tube does not get caught between the rim and the tyre beads. Check whether the valve stands upright. If not, dismount one bead again and reposition the inner tube.

To make sure the inner tube does not get pinched between the rim and the bead, move it sideways back and forth between the sides of the rim. While doing so, also check whether the rim tape has shifted.

Inflate the inner tube to the desired pressure. The maximum pressure is indicated on the side of the tyre.

Check whether the tyre is properly seated by inspecting the fine indicator line (c) just above the rim edge. This line should be even to the rim all around the tyre. Starting from the maximum tyre pressure you can now reduce the pressure through the valve to suit your needs. Observe the recommended tyre pressure range (d).



Tubeless tyres (UST tyres)

Tubeless tyres (e) are also referred to as “tubeless ready”. The rims are provided with specific valves, have an entirely enclosed rim base and partly also a specific rim shape. There is no inner tube.

Tyre Removal

Deflate the tubeless/UST tyre completely (f). Press the tyre from one side towards the centre of the rim, until the tyre bead is loose in the rim base.

Start removing the tyre close to the valve and lift one tyre side over the edge of the rim with your fingers.

After you have pulled the entire tyre side over the rim edge press, if necessary, the other tyre side into the rim base and remove this side also from the rim.

NOTICE

Do not use tyre levers (g) in order to avoid damage to the sensitive sealing lip on the tyre bead!

It is recommended that you use the tools of the respective tyre manufacturer for removal as they are designed to be used together.

Puncture Assistance – Repair

In case of a puncture, tubeless tyres can also be used with inner tubes. Remove any available perforating object from the tyre first and remove the valve from the rim. Insert a slightly inflated new inner tube into the tyre. Mount the tyre as described in chapter “**Clincher and Folding Tyres**”. You may need tyre levers for this purpose.

⚠ WARNING

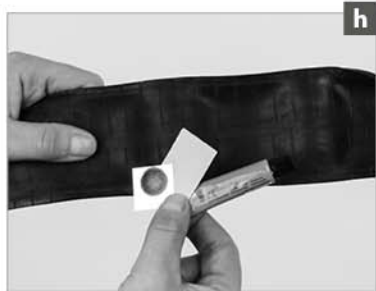
Improper mounting can lead to malfunctioning, tyre damage or even brake failure. Therefore, strictly observe the instructions of the component manufacturer.

NOTICE

There are also repair sprays available. You find more details on these sprays further below in this chapter.

SAFETY INSTRUCTIONS

There are specific patches (h) available for tubeless tyres which are applied inside. If need be you can also use a conventional repair patch. Always observe the operating instructions of the repair kit manufacturer.



Tyre Mounting

Before you start mounting make sure the inside of the tyre and the tyre bead are free of dirt and lubricant.

NOTICE

Do not use tyre levers to avoid damage. Press the tyre on the rim by exclusively using your hands to avoid damage to the tyre bead.

It is recommended that you use the tools of the respective tyre manufacturer for mounting as they are designed to be used together.

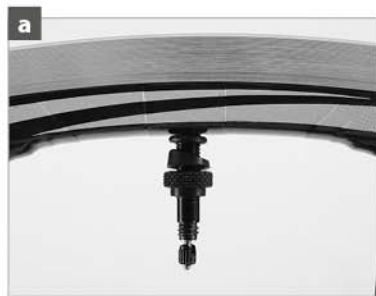
Insert the valve from the inside through the valve hole and slide the rubber seal as well as the plastic washer matching the shape of the rim on the valve stem. Screw on the valve nut with its flat side first until the valve fits reliably and is tight (a).

Observe whether the running direction of the tyre is indicated. Mounting tubeless tyres is like mounting clincher tyres. Start in the area opposite the valve and press the tyre into the rim base, as far as possible, without tool and by using your hands (b). Work yourself around until you reach the valve (c). Align the tyre equally.

Observe the position of the valve between the sides of the tyre. Apply some assembly liquid provided by the tyre manufacturer to the tyre bead and the inside of the rim edges (d). This makes the tyre slide easier into its position. Press the tyre to the side so that you reach the bottom with the sponge.

Check the seat of the tyre at the valve once again. Press from above on the tyre and work yourself around (e); make sure the tyre is equally seated all around and in contact with the tyre base.

The first air blast is crucial for the mounting (f). The tyre must inflate and be in contact with the rim immediately to make sure no air escapes. It is therefore recommended that you use a compressor or a powerful track pump. Inflate the tyre with quick blasts.



Once there is contact and the tyre is seated tightly continue inflating until you hear two pops. This noise indicates that the tyre is correctly seated. If there had been no popping noise when you have reached the maximum tyre pressure deflate the tyre and carefully apply mounting liquid once again.

Once the tyre is seated check along the indicator line (g) whether the tyre is seated equally around the entire circumference on both sides of the rim. Spin the wheel slowly and observe the course of the indicator line along the top edge of the rim. If necessary, deflate the tyre a little and align it.

When everything fits deflate the tyre and unscrew the valve from the valve stem. Shake the latex milk bottle strongly so that the ingredients mix up evenly. Fill about 30 ml of the sealant approved by the tyre manufacturer into the tyre (h).

Clean the area inside and outside the valve by using an absorbent cloth. Screw in the valve again. Inflate the tyre as described above. Spin the wheel slowly for a few rotations to make sure the liquid spreads inside the tyre.

Grasp the wheel with both hands, continue turning it gradually and shake or tilt it in both directions. This will spread the sealant inside reliably in all areas.

Finish by adjusting the air pressure to your needs or weight and the tyre width. Do not exceed the permissible maximum pressure. Tubeless tyres can be used with about half a bar to one bar less than clincher or folding tyres.

⚠ WARNING

Tubeless tyres have to be mounted together with a UST rim/UST wheel or a tubeless ready rim.

⚠ CAUTION

Tubeless tyres are often also tight without latex milk, but the latex milk significantly increases the puncture protection and should therefore be applied.

SAFETY INSTRUCTIONS

It is not only possible to ride with UST/tubeless tyres, but also with typical folding tyres without inner tube and filled with latex milk, if necessary. Read and observe the instructions of the supplier.



CAUTION

The valve nut of tubeless tyres must be checked regularly for a tight seat (a). With a loose valve air will quickly escape from the tyre.

When mounting tubeless tyres the tyre bead and the rim edges must be moistened with a special solution on both sides (b). Normally you can also use detergent diluted with water. This is the only way to make the tyre slip into its bed (c) and become air tight.

NOTICE

You can also inflate the tyre with the repair spray actually designed for a repair during the ride. The spray provides an integrated puncture protection. To do so slide the spray head on the valve. Align the bottle in a way that the opening of the head is flush with the valve. Keep the top of the head tight with one finger and press the bottle for about two minutes against the head. Pull the bottle from the valve with a jerk. Then set off on your bike for a few miles to make the latex milk spread inside the tyre.

NOTICE

In case of a puncture in your tubeless tyre you can repair the tyre inside as you would usually repair an inner tube. If you have filled latex milk inside beforehand the milk must be removed thoroughly in the area of the puncture, otherwise the patch will not stick. Inflate the tyre with the spray subsequently (d). Minor damage can also be repaired by only using the spray.

SAFETY INSTRUCTIONS

Inflating with a cycle or track pump is difficult. The sudden pressure increase which is necessary to make the tyre slip neatly and tightly into the rim seat can typically only be achieved with an electric compressor. The tight seat is indicated by one clearly audible pop per tyre side.



Tubular Tyres

The inner tube of a tubular tyre is sewed into the tyre and the entire tyre must be glued on a specific tubular tyre rim (e).

Tyre Removal

Deflate the tyre completely (f). For tyre removal press the tyre a little to one side in the area opposite the valve until there is a gap and the tyre starts to detach (g). If the tyre remains tight insert a tyre lever into the gap and lever the tyre off the rim (h).

Replacing an individual inner tube is not possible. You have to mount a complete tubular tyre on the rim instead. During the ride the tyre cannot be glued and is therefore not secure on the rim even after having been inflated.

For this reason ride back very slowly and carefully by taking the shortest way possible. Back home, you have to glue the tubular tyre as described in the following.

Tyre Mounting

A careful mounting which makes the tubular tyre stay durably on the rim must be performed step by step and can take some time. Some practice and experience with the tyre glue used and the respective tubular model can speed up the work.

SAFETY INSTRUCTIONS

In general, mounting tubular tyres is a job for your Raymon dealer. Perform the mounting by yourself only when you are sufficiently experienced and skilled. Read the mounting instructions of the tyre manufacturer before you start mounting.

There are two options of gluing the tyre: either by using an adhesive tape or liquid tyre glue (a, p. 66). The positive thing with adhesive tapes is that the tubular is mounted rather quickly. The tyre seat is, however, not sufficient for all cases. In case of a puncture during the ride, the tape often remains on the removed tyre and the spare tyre is no longer securely seated on the rim.

For this reason we recommend a solid bed consisting of several layers of liquid tyre glue (tyre cement). Glue not only provides a better hold of the tyre, but usually also remains on the rim when removing the tyre.



It is nevertheless necessary also in this case to remove the spare tyre once again after the ride. The existing bed as well as the tyre (b) are then treated once again with tyre glue (tyre cement) and re-mounted to stabilise the seat.

If you have wheels with very deep rim edges unscrew the valve insert with the specific mounting tool before the first mounting and mount a valve extension in its place (c). Screw the valve insert into the lengthened valve. Now you can inflate and deflate the mounted tyre through the extended valve as you are used to.

Inflate the tyre just to the point where it starts to become round and insert the valve into the rim hole. Start at the valve and press the tyre evenly into the rim base by working your way around. If you do not succeed in pushing the tubular tyre completely on the rim or if you only succeed by using excessive forces a clean mounting may be impossible at a later date.

Spin the wheel with the tubular tyre mounted and check whether the tyre runs true. The area where the valve comes out of the tyre is often thickened which leads to a vertical runout and makes the wheel jolt during the ride.

Deburr or countersink the valve hole of an aluminium rim by using a big drill (d), a triangular scraper or a round file.

If you have carbon rims deburr the hole edge carefully by using a round file. Insert the file only from the outside to the inside and not vice versa, otherwise the fibres of the synthetic matrix might fray out. Seal the area with instant glue subsequently. This pretreatment will make the valve fit more snugly against the rim.

If time permits you can leave the inflated tyre on the rim for a few days which will also ease the mounting at a later date.

Subsequently, clean the rim base of possibly adhering grease or oil by using a rag soaked with acetone, spirit or benzine.

Wait until the solvent has completely evaporated before you start gluing the tyre. The easiest way of applying the glue (e) is by mounting the wheel in a truing stand or a disused fork clamped in a vice.



Several layers of glue are necessary to create a well-adhering base with liquid tyre glue. Spread the tyre glue evenly and as thinly as possible around nearly the entire circumference of the rim.

With a little practice you can apply the glue directly from the tube. If you do not succeed a paintbrush with stiff bristles will ease this work. If you use tyre glue from a can a paintbrush is necessary anyway. Let the tyre glue (tyre cement) dry until it is no longer sticky and liquid when you touch it. This time span can last several hours.

Continue by applying two further thin layers following the same principle and let them dry once again. Also apply glue to the base tape of the tubular tyre. Leave the rim and the tyre as they are at least overnight.

Before mounting the tyre also apply glue to the base tape of the tubular tyre (f). Complete the bed of glue with one last layer of tyre glue. If necessary, you can leave an area of five to ten centimetres opposite the valve without glue when applying the last layer to have a point where you can start to remove the tyre at a later date.

Once the top layer has shortly dried but still feels viscous place the rim on the ground with the valve hole facing upward. Insert the valve of the slightly inflated and thus round tyre into the valve hole of the rim and press it firmly against the rim (g).

Make sure the tyre sides do not get in contact with the glue bed, otherwise your tyre looks dirty right away.

If you have left the area opposite the valve hole free of glue you need not be concerned to soil the ground or that the glue might collect dirt from the ground when you put down the rim.

Grasp the tyre with both hands on the right and left side of the valve, pull it forcefully downward and work it bit by bit into the rim base (h). Continue evenly until there are about 20 centimetres left.

Start at the valve and pull the tyre once again downward until your hands reach the area that has not yet been mounted.



Keep the tyre under tension by pressing the fingers against the rim and the thumbs against the tyre and place the wheel against your hip. Press the tyre with both thumbs over the edge of the rim (a).

When the tyre is seated in the rim base it has to be trued as it is only very rarely that the tyre runs true immediately. Mount the wheel once again on the mounting stand and spin it. If the tread is misaligned or if the tyre wobbles lift it up in this area, twist it slightly and let it down again.

When the tyre spins without lateral runout take the wheel from the mounting and inflate the tyre to about half of its nominal pressure. Apply load to the wheel over the ends of the axles and quick-releases and roll the wheel a few metres over the ground (b). As you roll the wheel, vary between pressing it vertically downward and inclined to either side.

If the tyre runs true during the final check inflate it to its maximum pressure, deflate until you have reached two thirds of the pressure and wait eight hours at least or even better a whole day, before setting off for the first time. Before cycling adjust the tyre pressure of the newly mounted tyre according to the recommendations of the tyre manufacturer and your needs.



⚠ WARNING

- A poorly performed gluing of the tyre can make the tyre detach from the rim. Risk of an accident!
- Use benzine and the highly flammable tyre glue (c) in well-ventilated spaces only. Store these products properly and out of the reach of children.

NOTICE

- Keep in mind that tyre glue not only adheres to rims and tyres, but also to fingers and clothes. It is therefore recommended that you wear old clothes.
- When mounting the tyre to an already used rim make sure to carefully remove possibly available old glue remnants and dirt by using sand cloth. Make sure that you do not damage the carbon material. Finish by wiping the rim with a soft cloth and acetone (d).

SAFETY INSTRUCTIONS

- Before removing a wheel read chapters "Wheels and Tyre Equipment" and "How to Use Quick-Releases and Thru Axles".

Wheel Mounting

Mounting the wheel is done in the reverse order of dismounting. Make sure the wheel is correctly seated in the drop-outs and accurately centred between the fork legs or the seat and chainstays. Make sure the quick-release and the drop-out safety tabs are correctly seated. For more information see chapter “**How to Use Quick-Releases and Thru Axles**”.

Close the quick-release lever at the brake (**Shimano, SRAM**) (e) or shift the pin in the brake lever/shifter assembly on the handlebar (**Campagnolo**) (f).

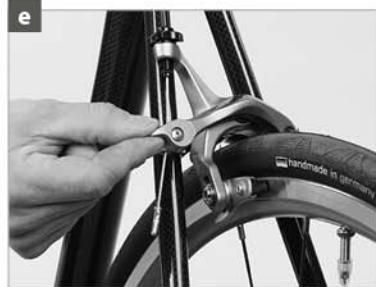
If you have **disc brakes**, check before mounting the wheel whether the brake pads rest snugly in their seats in the brake calliper body. The gaps between the brake pads and the wheel should be parallel and the wear indicators in their correct position. Make sure you guide the brake disc/rotor carefully between the brake pads.

If you have cantilever brakes (g) hook up the brake cable at the brake arm. To do this, grip the rim with one hand and press the brake pads and/or the brake arms together. In this position the usually barrel shaped nipple can easily be engaged.

After mounting the wheel and tightening the quick-release pull the brake lever (several times, if you have disc brakes). To do so lift the Raymon bicycle off the ground and spin the wheel with your hand. With the wheel spinning the rotor should not drag along the brake calliper or the brake pads and the rim should keep off the (rim) brake pads.

⚠ WARNING

- *After mounting the wheel pull the brake lever (several times, if you have disc brakes). You must reach a precise positive braking response.*
- *If you have rim brakes, make sure you hook up the brake cable immediately after the wheel mounting!*
- *Before setting off again check that the brake surfaces and/or rotors are still free of grease or other lubricants after the wheel mounting (h).*
- *Check whether the brake pads hit the rotors or brake surfaces of the rims. Make sure the wheel is properly seated and firmly fixed in the drop-outs. Always do a brake test as described in chapter “Before Every Ride”!*



HEADSET

The headset connects the fork to the frame, but allows it to move freely. It must turn with virtually no resistance, if the Raymon bicycle is to run straight, stabilising itself as it travels. Shocks caused by uneven road surfaces expose the headset to considerable levels of stress. In this way it can become loose and go out of correct adjustment.

⚠ WARNING

Riding the Raymon bicycle with a loose headset increases the loads on fork and bearings. This can lead to damage to the fork. Risk of accident!

Checking and Readjusting

Check the headset for play by placing your fingers around the upper headset cup (a).

Bring your weight to bear on the saddle, pull the front brakes with your other hand and push the bicycle firmly back and forth with the wheel remaining on the ground (b). If the bearing has play, you will feel the upper head tube race moving in jerks relative to the lower head tube race – visible as a small gap in between the head tube races.



To check whether the headset runs smoothly, lift the frame up until the front wheel no longer touches the ground. The handlebar should turn from far left to far right without feeling roughness or tightness at any point. With a gentle tap on the handlebar the fork should turn easily from the middle position (c).

If you face any problems during the test, contact your Raymon dealer.

⚠ WARNING

Check the secure seat of the stem after having adjusted the headset, by holding the front wheel between your knees and trying to turn the handlebar relative to the front wheel (d). Otherwise, a loose stem can cause an accident.

SAFETY INSTRUCTIONS

Adjusting the headset requires a certain amount of experience and should therefore be left to your Raymon dealer.

Threadless Headset – Aheadset®

(Aheadset® is a registered trade mark of Dia-Compe)

The distinct feature of this system is that the stem does not sit within the fork steerer tube, but rather slips over the fork steerer tube, which in this case is threadless. The stem is thus an important part of the headset, as the stem clamping fixes the adjustment (e). Instead of special tools you need in most cases only one or two Allen keys as well as a torque wrench to adjust the Aheadset®. Release the clamping bolt(s) located on the side of the stem by one to two turns (f). Gently tighten the countersunk adjusting bolt on top a little, e.g. by a quarter turn (g), by using an Allen key.

Realign the stem to ensure that the handlebar is at right angle to the wheel. Make sure the front wheel is in line with the top tube and the stem. Tighten the clamping bolts of the stem. Use a torque wrench and never exceed the maximum torque values (h)! You find the torque values on the components themselves, in the chapter “**Recommended Torque Values**” or in the possibly enclosed instructions of the component manufacturers. Alternatively, you find them in the download area on the websites of the respective component manufacturers. Check the headset for play as described above. Do not to overtighten the headset. **Risk of headset failure!**

⚠ WARNING

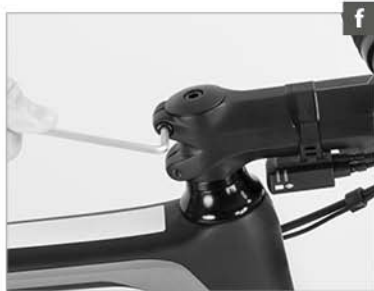
- **Bear in mind that by overtightening the bolts the stem can crush the steerer tube. In particular forks with carbon steerer tubes are highly sensitive to overtightening the steerer tube clamping at the stem. Risk of breakage! Follow the adjusting instructions of the carbon fork manufacturer, when you want to change the headset or stem adjustment.**
- **Check the secure seat of the stem by taking the front wheel between your legs and trying to turn the handlebar and stem relative to the wheel. A loose stem can cause an accident.**
- **Never change the preload mechanism inside the fork steerer tube. Never install a star nut in carbon fork steerer tubes.**

NOTICE

- **Do not overtighten the upper bolt, it only serves to adjust the headset play.**

SAFETY INSTRUCTIONS

- **If you do not succeed in adjusting the headset, this can have several reasons. If you are not absolutely sure, ask your Raymon dealer for help.**



THINGS WORTH KNOWING ABOUT BICYCLES AND CYCLING

Cycling Helmets and Glasses

Cycling helmets are a must when riding a bicycle. Your Raymon dealer has a variety of styles and sizes (a). Verify that the helmet complies with the European standard EN 1078. Cycling helmets are only approved for use during cycling. Observe the manufacturer's instructions.

⚠ WARNING

Never ride without a helmet and glasses (b)! But remember that even the safest helmet is useless unless it fits properly and is correctly adjusted and fastened.

Apart from a cycling helmet and suitable clothing, cycling glasses (c) are absolutely essential when you set off on your bicycle. They do not only protect your eyes from the sun and the wind, but also keep out flies and other impurities that may impede your vision when they fly into your eyes. **Risk of accident!** Good cycling glasses should fit tight on your face not allowing any wind to affect your eyes. Cycling glasses come in a wide range of models, such as glasses with clear lenses and without UV protection for cycling in the dawn and at night or glasses with maximum UV protection for cycling under extreme sunlight conditions.



Clothing

⚠ WARNING

Never ride with wide-cut trousers or skirts that might get caught in the spokes, chain or chainrings. To avoid any such mishap, use suitable clips or straps, if necessary.

For increased visibility to other road users be sure to wear bright-coloured clothing!

Pedals and Shoes

Cycling shoes (d) should be made of solid material to provide firm support for your feet. In addition, they should have a stiff sole so that the pedal cannot press through. The sole should not be too wide in the area of the heels, as the rear stays or the crank will otherwise get in the way of your pedalling. This will prevent your feet from assuming a natural position when pedalling and may cause knee pain in the long run.

Special cycling shoes are obligatory if your Raymon road racing bicycle is equipped with clipless pedals. With these shoes small cleats are fixed to the sole. They give you a firm connection between shoe and pedal and allow depending on the model an acceptable walking position.

The main advantage is that these clipless pedals (e) prevent your feet from slipping off when pedalling fast. They enable you not only to push but also to pull the pedals. This makes your pedalling more smooth and increases the power transmission compared to normal pedals.

The usual way to engage with the pedal is to turn it from the lowest position of the crank to the horizontal using the tip of the cleat and push down on the back of it. Normally, the shoe engages with the pedal with a click which you will hear and feel clearly.

The release force of clipless pedals is adjusted by means of an Allen key (f). If there are any creaking or squeaking noises occurring, some grease will solve the problem in most cases. These noises as well as lateral play of the shoe on the pedal can, however, be also signs of wear. Check the cleats at regular intervals.

⚠ WARNING

Make sure the fastening bolts of the cleats are properly tightened, as you will find it almost impossible to disengage your shoe from the pedal, if the cleat is loose. Risk of accident!

Taking up the pedals, engaging and disengaging the shoes should first be practised in standing (g). Later you can refine your technique in a place clear of traffic.



⚠ WARNING

Only use clipless pedals allowing you to engage and disengage smoothly. A defective pedal or a badly worn cleat can make the shoe disengage from the pedal. Or unclipping the shoe from the pedal is sometimes very difficult or even impossible. In both cases, there is the risk of an accident!

Make sure pedals and shoe soles are always clear of mud and other impurities (h) and grease the lock-in mechanism with lubricant at regular intervals.

⚠ CAUTION

Most cycling shoes with cleats are only suitable for walking to a limited extent. As the cleats, in particular when mounted to road bike shoes, are thicker than the sole, they provide less grip even on a non-slip ground.

SAFETY INSTRUCTIONS

Ask your Raymon dealer to inform you about the various shoe models. Cycling shoes come in various styles for specific uses.

Read the operating instructions of the pedal manufacturers. If you are in doubt or if you have any questions, contact your Raymon dealer.

Accessories

In purchasing this high quality bicycle (a) you laid the foundation for many years and miles of enjoyable cycling. Whatever you are planning to do with your bicycle, be sure to have proper equipment and to keep a few tips in mind. Your Raymon dealer has a variety of useful accessories on offer enhancing both your safety and convenience.

Your Raymon bicycle can be equipped with various kinds of accessories. Make sure to observe the requirements according to the traffic regulations in your country and the EN standards. Any retrofitted part must be compatible with your Raymon bicycle. If you are in doubt or if you have any questions, contact your Raymon dealer.

⚠ WARNING

Improper accessories may change the qualities of your Raymon bicycle and even cause an accident. Therefore, before fitting any accessories contact your Raymon dealer and observe the instructions regarding the intended use of your Raymon bicycle.

Bicycle Locks

Do not forget to take a high quality D-, folding or chain lock (b) with you on your ride. The only way to effectively protect your Raymon bicycle against theft is to lock it to an immovable object.



Puncture Kit

The most important accessories for a successful cycle tour are a tyre pump and a small tool kit. The tool kit should include two plastic tyre levers, the most commonly used Allen keys, a spare tube, a tyre repair kit and, if necessary, your mobile phone and a little cash (c). In this way you will be well prepared in the event of a puncture or some other mishap.

SAFETY INSTRUCTIONS

Retrofitted accessories, such as mudguards, pannier racks etc. can impair the functioning of your bicycle. Ask your Raymon dealer for advice before mounting any kind of accessories to your bicycle.

Before buying any additional bells or lighting accessories, inform yourself thoroughly whether they are permitted and tested and accordingly approved for use on public roads. Make sure additional battery/accumulator-powered lamps are marked with the wavy line and the letter "K".

Cycle Computers

There are electronic computers that show your current and average speed, your daily and annual mileage as well as the duration of the present ride (d). Real de luxe models also give the highest speed achieved, differences in elevation, your cadence or your heart rate.



Transporting Luggage – Bikepacking

There are various ways of carrying luggage on a Raymon bicycle. Your choice depends primarily on the weight and volume of the luggage. Using a specific bicycle rucksack is a convenient way of transporting luggage on a Raymon bicycle. But for longer tours it is recommended that you carry your luggage in special packing bags.

There are various options for what is called bikepacking, i.e. loading your gravel bike with luggage, which is described in the following.

On most gravel bikes you can attach additional bags (e) at the frame (1), the saddle (2), the handlebar (3) or the fork (4). If you are not absolutely sure about the packing bags allowed on your gravel bike, contact your Raymon dealer.

Rucksack

A special bikepacking rucksack is suitable for carrying e.g. large-volume items of clothing. Waist and chest straps ensure a secure fit. Different models provide additional back padding and lumbar support.

Frame Packs

Frame packs are usually attached to the top tube with Velcro fasteners or special adapters: smaller models on top of the top tube (f), larger packs within the frame triangle (g). It is advisable to pack items for that you need easy access in the packs attached on top of the top tube. Heavy items of luggage, on the other hand, should be placed as far down as possible, i.e. in the packs attached within the frame triangle.

When attaching the pack within the frame triangle, make sure you still have enough space for your water bottles. Furthermore, you should consider the width of the pack during packing. A too wide pack impedes pedalling. With larger frame packs it can also make sense to carry the water bottles in special holders at the fork.

Saddle Packs

Saddle packs (h) are usually attached to the saddle rails and the seat post with Velcro fasteners. The saddle pack should be strapped tightly so that it does not wobble during the ride. It is advisable to pack those items into the saddle pack that you do not need within easy reach during your tour and are relatively lightweight.



When getting on your gravel bike make sure you do not get caught on the saddle pack with your swinging leg (a).

Make sure the rear light and reflector are not covered when the saddle pack is attached.

Handlebar Packs

Handlebar packs are usually attached to the handlebar and the head tube with Velcro fasteners. The pack, also referred to as "roll pack" attached transversely to the direction of travel, should be attached in a way that it does not wobble during the tour.

In addition to the "roll pack" you can stow your luggage in standard handlebar bags at the handlebar that are usually attached with a quick-lock fastener. These handlebar bags are particularly suitable for valuables etc. that should be within easy reach during the tour.

When attaching the handlebar packs and bags make sure not to pinch the cables or hoses. Check whether your grip positions (b) are restricted by the handlebar bags and, if necessary, make yourself familiar with them in an area free of traffic before setting off. Also make sure the headlamp and reflector are not covered by the handlebar bags (c).

Fork Packs

Some gravel bikes allow the attachment of packing bags to the fork. Fork packs are attached either with specific adapters or an additional holder to the fork (d) and, if necessary, additionally secured with Velcro fasteners (e).

You should not pack too heavy items into the fork packs to prevent negative effects on the steering behaviour.

It is advisable to attach one fork pack respectively on either side of the fork to distribute the load evenly. This facilitates cycling as well as steering and parking.

If you are not absolutely sure whether fork packs are allowed on your gravel bike, contact your Raymon dealer.



Packing Bags on Rear Rack

Some gravel bikes are suitable for mounting rear racks. There are models which can be mounted to the seat post as well as to the rear stays. On these rear racks you can attach your luggage in additional packing bags.

When buying packing bags, make sure they are watertight so that you do not face unpleasant surprises during the first rain shower.

When loading your gravel bike observe the permissible load capacity of the rear rack and the packs and make sure the load is evenly distributed. Heavy pieces of luggage should be packed as far down as possible. Lightweight items should be packed in the packing bags attached in the top and, if approved for your model, on the rear rack.

⚠ WARNING

Be sure to read in any case the possibly enclosed instructions of the packing bag suppliers before attaching packing bags of any type to your gravel bike, loading them and setting off. If you are not absolutely sure or have any questions, contact your Raymon dealer.

⚠ WARNING

Luggage changes the riding characteristics of your Raymon bicycle in general and increases your stopping distance! Therefore, practise riding a loaded Raymon bicycle in a place free of traffic.

Your Raymon bicycle is designed for a maximum permissible overall weight including rider, luggage, Raymon bicycle and child seat or trailer load, if permitted. The maximum permissible overall weight is specified on the type plate on the Raymon bicycle or in the Raymon bike card in these operating instructions. If you are in doubt, contact your Raymon dealer. Do not overload your Raymon bicycle and also observe, if available, the maximum load capacity marked on or impressed on your rear rack (f). Under certain circumstances the maximum permissible overall weight can be further limited by the component manufacturers' recommendations for use.

Make sure the packing bags are closed and securely attached and the straps or buckles are fully closed and secured. Inadequately fastened packing bags can come loose during the ride or get caught in the rotating components.

Make sure the fastening straps are securely closed. If necessary, shorten too long straps before your first ride (g). Too long straps can get caught in the spokes and suddenly jam the front or rear wheel.

If necessary, adjust the tyre pressure to the additional weight (h).



NOTICE

Protect the areas of the frame where you attach packing bags, e.g. the top tube, from damage caused by abrasive attachments with stickers (a). You can get them from your Raymon dealer. Before mounting the stickers you should clean these areas of the frame (b).

SAFETY INSTRUCTIONS

Before attaching packing bags to your gravel bike, check that it is designed to be fitted with them. If you are not absolutely sure or have any questions, contact your Raymon dealer.

You find precise information on how to attach your packing bags in the possibly enclosed instructions of the respective packing bag manufacturer.

Taking Children with You**SAFETY INSTRUCTIONS**

Most Raymon road racing and triathlon bicycles do not allow the mounting of child carriers (c). This applies in particular to extremely lightweight frames. Ask your Raymon dealer for advice and have a look at the Raymon bike card. Also read the instructions of the child carrier manufacturer.

Prior to towing a trailer (d) or a kids' tandem bicycle/trailer system with your Raymon bicycle, check whether it is approved for towing. Have a look at the Raymon bike card or ask your Raymon dealer for advice.



BICYCLE TRANSPORT

By Car

Nearly every car accessory dealer and car company offers carrier systems (e) that allow the transport of a Raymon bicycle without disassembly.

The usual design involves rails fixed to the roof of the car onto which the bicycles are fixed with clamps gripping the down tubes. This can result in irreparable damage to the frame. High-end, very thin-walled aluminium or carbon frames are particularly susceptible to such kind of damage. Due to the material properties of carbon, you may not see a severe damage at first sight. This can result in an unforeseeable severe accident at a later date. There are, however, special suitable models available in the car accessory trade.

Rear carriers are becoming more and more popular. Their big advantage over roof carriers is that you do not have to lift up the Raymon bicycle so high to attach it. Make sure the clamps do not cause any damage to the fork or frame. **Risk of breakage!**

Whatever system you opt for, make sure it complies with the relevant safety standards of your country!

Read the operating instructions of your bicycle carrier (f) and observe the maximum load capacity and recommended or prescribed driving speed.

Observe the necessary drawbar load, if available.

⚠ WARNING

- **Make sure the lights and the number plate of your car are not hidden from view. For some carriers, a second exterior rear view mirror is required by the road traffic regulations.**
- **Always secure the Raymon bicycle or bicycle components when putting it/them into the interior of your car (g+h). Parts shifting around can impair your safety.**
- **Make sure to remove all parts of your Raymon bicycle (tools, pannier bags, etc.) which may come loose during transport. Risk of accident!**



⚠ WARNING

Do not buy a carrier on which the Raymon bicycle has to be mounted upside down, i.e. with the handlebar and saddle fixed face down to the carrier. This way of fastening the Raymon bicycle exposes handlebar, stem, saddle and seat post to extreme stress during transport. Do not opt for a carrier system with crank arm fit. Risk of breakage!

Check whether your Raymon bicycle is properly fastened before and at regular intervals during the ride. A Raymon bicycle that detaches from the roof carrier may endanger other road users.

Pull the brake levers and secure them with a strong elastic band (a), when transporting a Raymon cyclocross bicycle or gravel bike in lying position or suspended.

NOTICE

Most clamps are a potential source of damage to large-diameter frame tubes (b) that are not designed to be fixed in such clamps! Do not use such systems with carbon frames!

Secure the Raymon bicycles on the bicycle carrier with an additional lock (c) e.g. during a halt.

If your Raymon bicycle has disc brakes, be sure to mount the safety locks (d) before transporting your Raymon cyclocross bicycle or gravel bike with the wheels dismantled.

Bear in mind that your car may have a greater overall height. Measure the overall height and place a sign stating the height somewhere in the cockpit or on the steering wheel so that it can be easily seen.



By Rail/By Public Transport

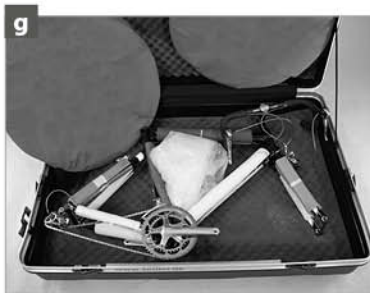
In cities the regulations for taking bicycles by public transport differ (e+f). There are e.g. some places where you are only allowed to travel with your Raymon bicycle during off-peak hours and with an additional bicycle ticket. Inform yourself in time about the regulations of carrying the bicycle before you start the trip!

In some countries regional trains have special spaces for the storage of bicycles and other things. This is an option to take your Raymon bicycle with you. They are often at the front or end of a train and marked with a bicycle sign.

When taking a high-speed train check whether you can take your Raymon bicycle with you.

SAFETY INSTRUCTIONS

Before you start your trip inform yourself in time about the conditions of carriage and also observe the regulations and rules about bicycle transport in the countries through which you intend to travel.



By Plane

If you want to take your Raymon bicycle with you when you go on a trip by plane, pack it in an appropriate bicycle suitcase (g) or in a bike cardboard box that you can obtain from your Raymon dealer. Special bicycle bags often do not provide sufficient protection for your Raymon bicycle.

Pack the wheels (in particular carbon wheels) in special wheel bags (h) to protect them inside the suitcase or the cardboard box. Do not forget to take the necessary tools, a torque wrench and bits and these operating instructions with you to be able to assemble the Raymon bicycle and to get it ready for use at your destination.

NOTICE

If your Raymon cyclocross bicycle or gravel bike has disc brakes be sure to mount the safety locks before transporting the Raymon bicycle with the wheels dismantled.

GENERAL NOTES ON CARE AND SERVICING

Maintenance and Servicing

Your Raymon dealer will have assembled and adjusted your bicycle ready for use when you come to collect it. Nevertheless, your bicycle needs regular servicing (a). Have your local Raymon dealer do the scheduled maintenance work. This is the only way to ensure that all components function safely and reliably for many kilometres/miles.

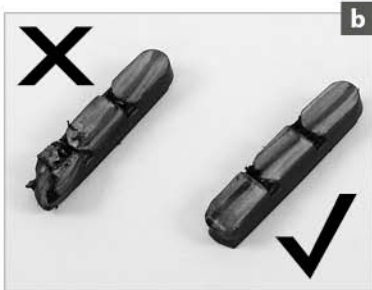
The Raymon bicycle will be due for its first service after 100 to 300 kilometres/60 to 180 miles (category 2 "Sports") or 300 to 450 kilometres/180 to 270 miles (category 1 (ASTM) / 6 (EN)) already or 4 to 12 hours of initial use (category 2 "Sports") or 10 to 15 hours of initial use (category 1 (ASTM) / 6 (EN)) or four to six weeks. The "break-in" period typically involves spokes slightly losing tension or gears becoming out of adjustment, so there is every reason to have your Raymon dealer service the bicycle at this stage. This "break-in" period is unavoidable. Therefore, remember to make an appointment with your Raymon dealer for the first inspection of your new bicycle. The first service is very important for both functioning and durability of your bicycle.

The intended use of the Raymon bicycle includes regular servicing and the replacement of worn out parts in time, e.g. brake pads (b) or Bowden and brake cables (c), and therefore has an influence on the liability for material defects and the warranty, as well.

It is advisable to have your bicycle serviced regularly by your Raymon dealer after the "break-in" period. If you ride a great deal on poor road surfaces, it will require correspondingly shorter service periods.

⚠ WARNING

- **Servicing and repairs are jobs best left to your Raymon dealer. If you have your Raymon bicycle serviced by anyone else than an expert, you run the risk that parts of your Raymon bicycle will fail. Risk of accident! When working on your Raymon bicycle restrict yourself to jobs for which you are equipped e.g. with a torque wrench including bits and have the necessary knowledge.**
- **If a component needs to be replaced, make it a rule to only use original spare parts (d). Wearing parts of other manufacturers, e.g. brake pads or tyres that are not of identical size, may cause harm to the safety of your Raymon bicycle. Risk of accident!**
- **For your own safety, bring your category 2 "Sports" Raymon bicycle to your Raymon dealer for its first inspection after 100 to 300 kilometres (60 to 180 miles), 4 to 12 hours of initial use or four to six weeks, at the very latest, however, after three months.**
- **For your own safety, bring your category 1 (ASTM) / 6 (EN) Raymon bicycle to your Raymon dealer for its first inspection after 300 to 450 kilometres (180 to 270 miles), 10 to 15 hours of initial use or four to six weeks, at the very latest, however, after three months.**



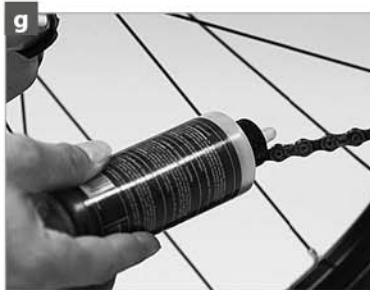
Cleaning and Caring for the Bicycle

Dried sweat, dirt and salt from riding during the winter or in sea air can harm your Raymon bicycle. You should therefore make it a habit of cleaning all components at regular intervals.

Avoid cleaning your Raymon bicycle with a pressure water washer. The high-pressure water ejected in a narrowly focused jet may pass through seals and penetrate bearings. This leads to the dilution of lubricants and consequently to greater friction. This destroys and impairs the functioning of the bearing races in the long term. Pressurised water also tends to abrade frame stickers.

A much more gentle way of cleaning your Raymon bicycle is with a low pressure water jet or a bucket of water and a sponge or a large brush. Cleaning your Raymon bicycle by hand has another positive side-effect: you may discover defects in the paint (e) as well as worn or defective components at an early stage.

Inspect the chain after you have finished cleaning (f) and oil it, if necessary (g) (see chapter “Chain – Care and Wear”). Apply a coat of standard hard wax on painted, metal and carbon surfaces (except for brake surfaces) (h). Polish the waxed surfaces after drying to give them a nice shine.



⚠ WARNING

- While cleaning, watch out for cracks, scratches, dents as well as bent or discoloured material. Have defective components replaced immediately and touch up paint defects. If you are in doubt or if you have any questions, contact your Raymon dealer.
- Keep cleaning agents and chain oil free of the brake pads, brake discs/rotors and rim sides (brake surfaces). This could render the brake ineffective (see chapter “Brake System”)! Never grease or lubricate the clamping areas of a frame made of carbon, e.g. handlebar, stem, seat post and seat tube. Once greased, carbon components may never again ensure reliable clamping.

NOTICE

- Do not clean your Raymon bicycle with a high-pressure water or steam jet and if you do, be sure to keep it at a distance.
- Only use petroleum based solvents for cleaning tough oil or grease stains from paint and carbon surfaces. Never use degreasing agents containing acetone, methyl chloride or the like, or solvent-containing, non-neutral or chemical cleaning agents that could attack the surface!

SERVICE AND MAINTENANCE SCHEDULE

You should have your Raymon bicycle serviced regularly after the “break-in” period. The schedule given in the table below is a rough guide for cyclists who ride their bike between 2,500 and 3,000 km (1,500 and 1,800 miles) or 60 to 100 hours of use a year.

If you consistently ride more or if you ride a great deal on poor road surfaces, the maintenance periods will shorten accordingly. This applies in particular to Raymon cyclocross bicycles and gravel bikes.

Component	What to do	Before every ride	Monthly	Annually	Other intervals
Lighting	Check function	■			
Tyres	Check pressure	■			
	Check tread and side walls		■		
Brakes (rim brakes)	Check lever travel, wear of brake pads, position of pads relative to rim, if necessary, test brakes in standing	■			
Brakes, brake pads (rim brakes)	Clean		■		
Brake cables, pads, hoses	Visual inspection		■		
Brakes (disc brakes)	Check lever travel, wear of brake pads, check seals, test brakes in standing	■			
Rims (of rim brakes)	Check thickness, replace if necessary				✗ After second set of brake pads at the latest
Fork (rigid)	Check and replace, if necessary				✗ At least every two years
Bottom bracket	Check for bearing play		■		
	Dismount and regrease (cups)			✗	
Chain	Check and grease, if necessary	■			
	Check wear, replace, if necessary				✗ After 1,000 km (600 miles) or 40 hours of use
Crank	Check and retighten, if necessary		■		

Component	What to do	Before every ride	Monthly	Annually	Other intervals
Painted/anodized/carbon surfaces	Polish				■ At least every 6 months
Wheels/spokes	Check for trueness and tension		■		
	True or retighten				✗ If necessary
Handlebar and stem (aluminium and carbon)	Check and replace, if necessary				✗ Every 2 years at the latest
Headset	Check for bearing play		■		
	Regrease			✗	
Metal surfaces	Polish (except: rim sides of rim brakes, rotors)				■ At least every 6 months
Hubs	Check for bearing play		■		
	Regrease			✗	
Pedals (all)	Check for bearing play		■		
Pedals (clipless)	Clean and grease locking mechanism		■		
Seat post/stem	Check bolts		■		
	Disassemble and regrease			✗	
	Carbon: new assembly paste (no grease!)				
Front/rear derailleur	Clean and grease		■		
Quick-releases	Check seat	■			
Bolts and nuts	Check and retighten		■		
Valves	Check seat	■			
Cables gears/brakes	Dismount and regrease			✗	

If you have a certain degree of mechanical skills, experience and suitable tools, such as a torque wrench, you should be able to do the checks marked ■ by yourself. If you come across any defects, take appropriate measures without delay. If you are in doubt or if you have any questions, contact your Raymon dealer.

Jobs marked ✗ are best left to your Raymon dealer.

RECOMMENDED TORQUE VALUES

All bolted connections of the bicycle components have to be tightened carefully and checked regularly to ensure the safe and reliable operation of the Raymon bicycle. This is best done with a torque wrench that disengages as soon as the desired torque value is reached or a click-type torque wrench.

Tighten carefully by approaching the prescribed maximum torque value in small steps (0.5 Nm increments) and check in between the proper fit of the component. Never exceed the maximum torque value indicated by the manufacturer!

Where no maximum torque value is given start with 2 Nm. Observe the indicated values and follow the enclosed manuals of the component manufacturers.

⚠ WARNING

Always use a torque wrench and do not exceed the maximum torque values! You find the torque values on the components themselves, in the chapter "Recommended Torque Values" or in the possibly enclosed instructions of the component manufacturers. Alternatively, you find them in the download area on the websites of the respective component manufacturers.

Component	Manufacturer	Type	Fixing bolt	Cable clamp	Pulleys
Rear derailleurs	Campagnolo	until 2014	10–12	6	3
		EPS	15		2.7
		Wireless / mech.	10–12	5	2.7
	Shimano	all	8–10	6–7	2.5–5
	SRAM	single (Apex mech.)	10–12	4–5	
		single (Eagle Transmission)	35		3
		single (Road AXS / XPLR AXS)	5		
		double (Road AXS)	5	5–7	
Front derailleurs	Campagnolo	Clamp mount	5	5	
		Dircet mount	7	5	
		Chain security device	5		
		Frame protection fin	7		
	Shimano	Clamp mount / direct mount	5–7	6–7	
		Clamp mount / direct mount / Sora (R3000) / Claris (R2000)	5–7	5–7	
	SRAM	Clamp mount	4–5	5	
		Dircet mount	5–7	5	
		Clamp mount / direct mount (AXS)	6		
		Clamp mount / direct mount (eTap)	5–7		

Component	Manufacturer	Type	Fixing bolt/nut	Fixed shoe/ expanding cone
Brake lever/ shifter	Campagnolo	Disc / side-pull brake	10	
		Disc wireless	8	
	Shimano	Drop bar (STI)	6–8	
		Straight handlebar – Sora (R3000) / Claris (R2000)	3–5	
		Straight handlebar – Tiagra (4700)	3	
		Dura Ace (ST-R9160 / ST-R9180)	1–1.3	0.3–0.5
		Dura Ace (SW-R9160)	1.5	
	SRAM	Disc (HRD) – drop bar	7	
		Disc (HRD) – drop bar (AXS)	6	
		Side-pull brake (also eTap)	6–8	
		Side-pull brake (AXS)	8	
		Disc – triathlon		3

Component	Manufacturer	Type	Fixing bolt/nut	Cable clamp	Bleeder screw/valve
Brake calliper	Campagnolo	Side-pull brake – dual pivot	10	5	
		Side-pull brake – direct mount	8	5	
		Cantilever	6–8	2.5–3	
		Cantilever – cross cable carrier – centre		2–2.5	
		Cantilever – cross cable carrier – outside		1–1.5	
		Disc – flat mount / adapter	6		4
	Shimano	Side-pull brake – dual pivot	8–10	6–8	
		Side-pull brake – direct mount	5–7	6–8	
		Cantilever	5–7	6–8	
		Disc – post mount / flat mount	6–8		
		Dura Ace – Tiagra			4–7
	SRAM	Side-pull brake – / dual pivot	8–10	6–8	
		Side-pull brake – direct mount	5–7	6–8	
		Cantilever	5–7	3–5	
		Disc – flat mount	5		1.6
		Disc – post mount	6		1.6

Component	Manufacturer	Type	Fixing bolt/nut	Cable clamp	Bleeder screw/valve
Brake calliper	Tektro	Side-pull brake – dual pivot	8–10	6–8	
		Cantilever	6–8		
		Cross cable at brake arm		6–8	
		Cable triangle at cross cable top		6–8	
		Cable triangle at cross cable bottom		1–1.5	

Component	Manufacturer	Type	Fixing bolt/nut	Safety bolt disc	Safety bolt cartridge
Brake pad	Campagnolo	Side-pull brake – dual pivot / direct mount	8		n/s
		Cantilever	6–8		
		Disc		n/s	
	Shimano	Side-pull brake – dual pivot / direct mount	5–7		1–1.5
		Cantilever	8–9		
		Disc – slot		0.2–0.4	
		Disc – hexagon socket		2–4	
	SRAM	Side-pull brake – single / dual pivot / direct mount	5–7		0.5–1
		Cantilever	6–8		
		Disc – hexagon socket		1.1	
	Tektro	Side-pull brake – dual pivot	5–7		1–1.5
		Cantilever	6–8		
		Disc – hexagon socket		0.8–1.2	

Component	Manufacturer	Type	Fixing bolt (clamp)	Bleeder screw/valve adjusting bolt	Fixed shoe/ expanding cone
Brake lever	Campagnolo	Disc / side-pull brake	10	0.5	
		Disc wireless	8	0.5	
	Shimano	Disc – drop bar (STI) / straight handlebar	6–8	0.5–0.7	
		Side-pull brake – drop bar (STI) / straight handlebar	6–8		
		Disc – triathlon (ST-R9180)	1–1.3	0.5–0.7	0.3–0.5
	SRAM	Disc (HRD) – drop bar	7	1.6	
		Disc (HRD) – drop bar (AXS)	6	1.6	
		Disc – triathlon		1.6	3
		Side-pull brake (also eTap)	6–8		
		Side-pull brake (AXS)	8		
		Side-pull brake – triathlon		1.4	8

Component	Manufacturer	Type	Union nut/ screw	(Banjo) connector fixing bolt
Brake hose	Campagnolo	Disc – brake lever – (flat mount)		3
		Disc – brake calliper – (flat mount)	4	
	Shimano	Disc – brake lever – (flat mount)	5–6	
		Disc – brake lever – (post mount)	5–7	
		Disc – brake calliper – (flat mount / post mount)	5– 6/7	
	SRAM	Disc – brake lever	8	
		Disc – brake calliper – (flat mount / post mount)	5–6	
		Disc – brake calliper – (post mount) – Torx		5

Component	Manufacturer	Type	Lock nut/ disc	Fixing bolts
Brake disc/rotor	Campagnolo	Center Lock	40	
	Shimano	Center Lock	40	
		6-hole / 5-hole		2–4
	SRAM	Center Lock	40	
		6-hole		6.2
	Tektro	6-hole		4–6

Component	Manufacturer	Type	(Crank) fixing bolts	Others
Crankset	Campagnolo	Over torque (installation tool UT-FC220)	40	
		Over torque (installation tool UT-FC120)	max. 50	
		Over torque – union nut		8–10
		Over torque – compensation system for play		hand-tight
		Power Torque	42	
	Shimano	Pro Tech / Ultra Torque	42–60	
		Square-head	35–50	
		Octalink	35–50	
		Hollowtech II – left crank arm	12–14	0.7–1.5
	SRAM	DUB	54	
		DUB – preload adjuster	flush	
		DUB – self-extracting bolt	hand-tight	
		30 mm spindle	54	
		30 mm spindle- preload adjuster	flush	
		24 mm GXP	48–54	

Component	Manufacturer	Type	Fixing bolts/ lock ring
Chainring/ crank spider	Campagnolo	Over Torque / Power Torque / Pro Tech / Ultra Torque	8
	Shimano	Dura Ace (R9200 / R9200-P) – double	12 – 16
		Ultegra (R8100 / R8100-P) – double	12 – 16
		105 (R7100 / R7000) – double	12 – 16
		Tiagra (4700 / 4703) – double / triple big / medium	12 – 16
		Sora (R3000 / R3030) – double / triple big / medium	12 – 14
		Sora (R3030) – triple small	16 – 17
		GRX (RX820 / RX810) – single / double	12 – 16
		GRX (RX610 / RX600) – single / double	16 – 17
	SRAM	3-bolt – direct mount	9
		3-bolt – crank spider	9
		4-bolt AXS – single / double	12
		5-bolt X-Sync	9
		8-bolts	4

Component	Manufacturer	Type	Fixing of the BB cups
Bottom bracket	Campagnolo	Over Torque / Power Torque / Pro Tech / Ultra Torque	35
	Shimano	Square-head / Octalink	50–70
		Hollowtech II	35–50
	SRAM	DUB BSA / Italian / T47	50
		GXP / power spline	34–41

Component	Manufacturer	Type	Lock/ safety ring
Cassette sprockets	Campagnolo	13-speed (Ekar) – 9-tooth	45
		13-speed (Ekar) – 10-tooth	40
		12-speed	40
		11-speed – 29-tooth max.	40
		11-speed – 32-tooth max.	50
		10-speed – 30-tooth max.	50
	Shimano	HG / Microspline	40
	SRAM	XDR / XD	40
		Splined non-XD	40

Component	Manufacturer	Type	Pedal axle
Pedals	Campagnolo	Pro Fit +	40
	Shimano		35-55
	SRAM	Crank – non-DUB	47-54
		Crank – DUB	54
Component	Manufacturer	Type	Fixing bolt
Shoes	Shimano	Cleat	5-6

Do not apply these torque values to the components from other manufacturers. Also observe the values in any enclosed instructions from the component manufacturers.

<https://www.campagnolo.com>

<https://si.shimano.com>

www.sram.com

www.tekro.com

Sheltering and Storing the Bicycle

If you regularly service your Raymon bicycle during the year, you will not need to take any special precautions when storing it for a short time, apart from securing it against theft. It is advisable to store the Raymon bicycle in a dry and airy place.

There are some things to bear in mind, when putting the Raymon bicycle away for the winter: Inflated tubes tend to gradually lose air when the Raymon bicycle is not used for a long time. If the Raymon bicycle is left standing on flat tires for an extended period, this can cause damage to the structure of the tyres. It is therefore better to hang the wheels or the entire Raymon bicycle or to check the tyre pressure regularly (a).

Clean the Raymon bicycle (b) and protect it against corrosion. Your Raymon dealer offers a variety of care products, such as spray wax etc. (c).

Dismount the seat post and let dry away possibly penetrated humidity. Spray atomized oil into the seat tube in the case of metal frames only. Shift the gear to the smallest chainring and the smallest sprocket (d). This relaxes both cables and springs.

⚠ WARNING

Never apply grease or oil into a seat tube of a frame made of carbon, unless an aluminium sleeve is inside the frame. If you mount a carbon seat post, do not put any grease on it, even if the frame is made of metal. Once greased, carbon components may never again ensure reliable clamping.

SAFETY INSTRUCTIONS

There is usually minimal waiting time for repairs and servicing at your Raymon dealer during the winter months. What is more, many dealers offer annual checks at a special price. Use the off-season to take your Raymon bicycle to your Raymon dealer for inspection!



LEGAL REQUIREMENTS FOR RIDING ON PUBLIC ROADS

In **Great Britain** (as of January 2024)

According to the **Highway Code** in Great Britain your bicycle must be equipped as follows:

1. Lighting, rear lights, reflectors:

At night your bicycle must have:

- a white front light (e)
- a red rear light
- a red rear reflector
- four amber pedal reflectors (if manufactured after October 1, 1985)

In addition, it should be equipped with:

- a white front reflector
- spoke reflectors
- flashing lights are permitted, a steady front lamp is however recommended.

(Law RVL R regs 13, 18 & 24)

It is not required that the prescribed lighting is mounted upon sale of the bicycle. If it is, however, it must comply with these regulations. Bicycles that are only used with good daylight visibility, such as e.g. road racing bicycles, are exempt from the lighting regulations.



2. Brakes

Every bicycle must be equipped with at least one braking system (f).
(Laws PCUR regs 6 & 10)

3. Signalling devices

It is recommended that a bell be equipped.

4. Cycle helmets

Wearing a cycle helmet which conforms to current regulations in the correct size and securely fastened is recommended.

5. Child transport

There are no rules as to the transport of children with bicycles.

6. Bike trailer lighting

Cycle trailers must be equipped with a red rear light as well as a triangular rear reflector with an ECE mark III or IIIA.

7. Hand held mobile phones

Cycling with a hand held mobile phone is not illegal as such. You could, however, commit an offence of "careless riding" or "riding without due care and consideration". For safety reasons, you are strongly advised against using a mobile phone during cycling.

8. Other issues

Using cycle lanes is not compulsory, but can make your journey safer. You must not cycle on a pavement.

(Laws HA 1835 sect 72 & R(S)A 1984, sect 129)

SAFETY INSTRUCTIONS

For more important information on cycling, see chapter "General Safety Instructions".

For further information see:

www.direct.gov.uk

www.dft.gov.uk

www.ctc.org.uk

WARRANTY AND GUARANTEE

Your Raymon bicycle was manufactured with care and delivered to you by your Raymon dealer fully assembled.

As direct purchaser you have full warranty rights within the first two years after purchase. Contact your Raymon dealer in the event of defects.

To ensure a smooth handling of your claim, it is necessary to present your receipt, your Raymon bike card and the handover report. Therefore, be sure to keep these documents in a safe place.

To ensure a long service life and good durability of your Raymon bicycle, use it only for its intended purpose (see chapter **“Before Your First Ride”** and **“Intended Use”**). Observe the permissible weight specifications indicated on the type plate on the Raymon bicycle or in the Raymon bike card in these operating instructions. If you are in doubt, contact your Raymon dealer. In addition, you have to follow the manufacturers' mounting instructions of the (above all, the torque values of the bolts) as well as the prescribed maintenance schedule.

Observe the checks and routines listed in this manual or in any other manual enclosed with this delivery (see chapter **“Service and Maintenance Schedule”**) as well as any instructions as to the replacement of safety-relevant components, such as handlebars, brakes etc.

SAFETY INSTRUCTIONS

This warranty law is only valid in the countries that have implemented the EU Directive into national law. Inform yourself about the regulations in your country. In the United Kingdom, see the respective regulations in the Consumer Rights Act 2015 (CRA 2015).

A Note on Wear

Some components of your Raymon bicycle are subject to wear due to their function. The rate of wear will depend on care and maintenance and the way you use your Raymon bicycle (mileage, riding in the rain, dirt, salt etc.). Raymon bicycles that are often left standing in the open may also be subject to increased wear through weathering.

The components below require regular care and maintenance. Nevertheless, sooner or later they will reach the end of their service life, depending on conditions and intensity of use. Parts that have reached their limit of wear must be replaced.

This concerns:

- Drive chain
- Brake pads
- Brake fluid
- Brake discs/rotors
- Brake cables
- Brake cable housings
- Rims of rim brakes
- Rubber grips
- Chainrings
- Handlebar tape
- Illuminants
- Tyres and inner tubes
- Sprockets
- Saddle covering
- Bowden cables
- Bowden cable housings
- Pulleys
- Lubricants

SAFETY INSTRUCTIONS

Ask your Raymon dealer about any additional guarantee given by the manufacturer of your Raymon bicycle and insist on having it as printed version.

SERVICE SCHEDULE – STAMP FIELDS**1st service**

Category 2 “Sports”: After 100–300 kilometres (60–180 miles) or 4–12 hours of use or after three months from date of purchase at the latest

Category 1 (ASTM) / 6 (EN): After 300–450 kilometres (180–270 miles) or 10–15 hours of use or after three months from date of purchase at the latest

Order no.: _____

Date: _____

Mileage: _____

☐ All necessary maintenance work carried out (see service and maintenance schedule); replaced or repaired parts:

Stamp and signature of the Raymon dealer:

2nd service

Category 2 “Sports”: After 2,500 kilometres (1,500 miles) or 100 hours of use or after one year at the latest

Category 1 (ASTM) / 6 (EN): After 3,000 kilometres (1,800 miles) or 100 hours of use or after one year at the latest

Order no.: _____

Date: _____

Mileage: _____

☐ All necessary maintenance work carried out (see service and maintenance schedule); replaced or repaired parts:

Stamp and signature of the Raymon dealer:

3rd service

Category 2 “Sports”: After 5,000 kilometres (3,000 miles) or 200 hours of use or after two years at the latest

Category 1 (ASTM) / 6 (EN): After 6,000 kilometres (3,600 miles) or 200 hours of use or after two years at the latest

Order no.: _____

Date: _____

Mileage: _____

☐ All necessary maintenance work carried out (see service and maintenance schedule); replaced or repaired parts:

Stamp and signature of the Raymon dealer:

Stamp and signature of the Raymon dealer:

7th service

Category 2 "Sports": After 15,000 kilometres (9,000 miles) or 600 hours of use or after six years at the latest

Category 1 (ASTM) / 6 (EN): After 18,000 kilometres (10,800 miles) or 600 hours of use or after six years at the latest

Order no.: _____

Date: _____

Mileage: _____

☐ All necessary maintenance work carried out (see service and maintenance schedule); replaced or repaired parts:

Stamp and signature of the Raymon dealer:

8th service

Category 2 "Sports": After 17,500 kilometres (10,500 miles) or 700 hours of use or after seven years at the latest

Category 1 (ASTM) / 6 (EN): After 21,000 kilometres (12,600 miles) or 700 hours of use or after seven years at the latest

Order no.: _____

Date: _____

Mileage: _____

☐ All necessary maintenance work carried out (see service and maintenance schedule); replaced or repaired parts:

Stamp and signature of the Raymon dealer:

9th service

Category 2 "Sports": After 20,000 kilometres (12,000 miles) or 800 hours of use or after eight years at the latest

Category 1 (ASTM) / 6 (EN): After 24,000 kilometres (14,400 miles) or 800 hours of use or after eight years at the latest

Order no.: _____

Date: _____

Mileage: _____

☐ All necessary maintenance work carried out (see service and maintenance schedule); replaced or repaired parts:

Stamp and signature of the Raymon dealer:

10th service

Category 2 "Sports": After 22,500 kilometres (13,500 miles) or 900 hours of use or after nine years at the latest

Category 1 (ASTM) / 6 (EN): After 27,000 kilometres (16,200 miles) or 900 hours of use or after nine years at the latest

Order no.: _____

Date: _____

Mileage: _____

☐ All necessary maintenance work carried out (see service and maintenance schedule); replaced or repaired parts:

Stamp and signature of the Raymon dealer:

Notes

HANDOVER REPORT

The above-described Raymon bicycle was delivered to the customer ready for use, i.e. after its final assembly, inspection and functional check as described below (additionally required routines in parentheses).

- ☐ Lighting
- ☐ Brakes front and rear
- ☐ Wheels (trueness/spoke tension/tyre pressure)
- ☐ Handlebar/stem (position/bolts with torque wrench)
- ☐ Pedals (adjustment of release force, if necessary)
- ☐ Saddle/seat post (saddle height and position of saddle adjusted to suit customer, bolts with torque wrench)
- ☐ Gears (limit stops!)
- ☐ Bolted connections of add-on parts (with torque wrench)
- ☐ Other routines performed _____
- ☐ Test ride carried out

Name
Raymon dealer _____

Street _____

ZIP code/city _____

Phone/Fax _____

E-mail _____

**Delivery date,
stamp,
signature of
Raymon dealer** _____

The customer confirms with his signature that he received the Raymon bicycle in proper condition along with the accompanying documents specified below and that he was instructed on the proper use of the Raymon bicycle.

- ☐ Raymon manual/operating instructions

Additional instructions

- ☐ Brake system ☐ Seat post, stem ☐ Pedal system
- ☐ Gear system ☐ Others
- ☐ Supplementary instructions "E-bike/EPAC"

Name customer _____

Street _____

ZIP code/city _____

Phone/Fax _____

E-mail _____

City, date _____

**Signature of
customer** _____

- ☐ I hereby expressly consent that my above-mentioned data are stored by the Raymon dealer and made available to the manufacturer so that I can be contacted directly e.g. in the event of a recall. The data will not be transmitted to third parties or used otherwise.

**Signature of
customer** _____

RAYMON BIKE CARD

Manufacturer R Raymon Bicycles GmbH

Model _____

Frame no. _____

Frame type _____

Frame size _____

Size of wheels and tyres _____

Colour _____

Special features _____

Intended Use

Use in accordance with

- ☐ category 2 "Sports"
- ☐ category 1 (ASTM F2043-13) / category 6 (EN 17406:2021-11)

Maximum permissible overall weight

Raymon Bicycle, rider, luggage and child seat or trailer load, if permitted _____ kg

Pannier rack allowed ☐ yes ☐ no

Permissible load _____ kg

Child carrier allowed ☐ yes ☐ no

Trailer allowed ☐ yes ☐ no

Permissible trailer load _____ kg

Brake levers – Brake assignment

Right lever: ☐ front wheel brake
☐ rear wheel brake

Left lever: ☐ front wheel brake
☐ rear wheel brake

⚠ WARNING

Read at least chapters "Before Your First Ride", "Intended Use" and "Before Every Ride" in these Raymon operation instructions.

Stamp and signature of the Raymon dealer

(Hint to the Raymon dealer: Copy the Raymon bike card and the handover report and keep one copy in your customer file. Send another copy to the bike manufacturer, if necessary. Make sure the customer confirms by his signature on the handover report that his personal data are made available to the manufacturer.)

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