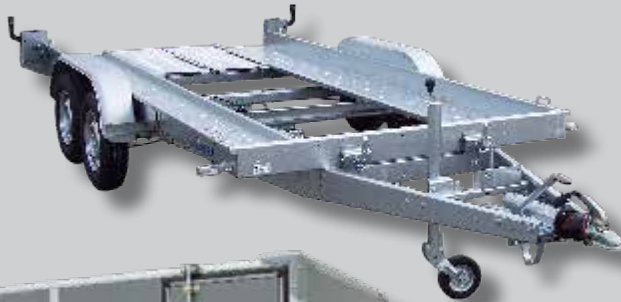


Lider

TRIGANO

TRAILERS

USER AND MAINTENANCE MANUAL



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BOAT TRAILERS BOAT CARRIER

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(to be carried out during delivery in front of customer).	

You have chosen a road trailer designed and manufactured by the Trigano group and we thank for this. All the information contained in this User Manual will help you use and maintain your trailer, ensuring that it lasts as long as possible. This User and Maintenance Manual is common to the whole Trigano range and covers most of the equipment and options.

All the information and characteristics contained in this brochure were up to date at the time of publication and they are provided for your information only. The manufacturer cannot be held liable for its content. However, within the context of our continuous improvement policy, we reserve the right to make modifications to it at any time, without warning.

If you are selling your trailer, we ask you to hand on this manual to the buyer, so that he may share in the information required for its proper use.

Safe journey and share with us the pleasure of towing a trailer that is now considered a vehicle in its own right!

*We ask you to read this guide carefully
and to pay particular attention to the technical data
to ensure proper running and reliable safety.*

European homologation:

Following its objective of guaranteeing a high level of safety and protecting the environment, the European Union has established new technical directives in relation to the homologation of vehicles and, in particular, trailers through the 2007/46/CE Directive.

The purpose of this directive is to certify that trailers have been subjected to a series of checks before being marketed in Europe.

In compliance with this directive, all our trailers leaving the factory are identified by the sticker below:



A certificate of conformity is sent with every trailer. With this the trailer can be registered throughout Europe according to the national regulations in force.

TRIGANO grants a one-year contractual warranty from the date the trailer is delivered to the customer. For some parts and some trailer models, a warranty extension of two years is available, on condition that the trailer maintenance is carried out by a Trigano dealer, in compliance with the maintenance requirements.

The contractual warranty includes: free supply and substitution of parts recognized as faulty, following a joint survey, with the exclusion of all other losses.

The contractual warranty does not cover:

- Apparent defects, incidents originating from the wear and tear of the equipment,
- Abnormal use, even temporary overloading, a lack of maintenance
- Modifications or transformations that have not been approved by our technical service.
- Costs related to normal use of the trailer as well as the expenses linked to its regular maintenance or its non-use for an extended period (for example the tyres, bearings, shock absorbers, light bulbs).
- Trigano dealer workshop labour.
- The use of spare parts that are not factory originals or that are not conform.
- Repair carried out by an unauthorized workshop without the prior agreement of the manufacturer.

- Compensation of any kind whatsoever. Any possible losses suffered by the user of the trailer, such as towing, breakdown costs, rental of a substitute trailer, etc.

- Trailer transportation costs.
- Damage due to overloading, speeding violations or use outside the road network.
- Defects arising from not complying with the manufacturer's instructions defined in this manual.
- Defects arising from non-compliance with regulations in force.
- Not complying with the terms of maintenance and adjustment of the trailer defined in this manual. The warranty cannot be applied when the trailer is washed with a high-pressure device or if it has been the subject of external stress (salt, fertilizer, any corrosive product, or any product incompatible with zinc).
- Assembly of accessories not carried out by the manufacturer or a Trigano dealer.

It is important to observe the maintenance or servicing intervals recommended by the manufacturer at the end of this booklet. Do not forget to have it filled in at the end of each service. This document is the proof that these intervals have been observed!

To quickly and correctly pay your spare parts orders, or make a warranty claim, you must systematically visit your Trigano dealer in the possession of your purchase invoice and the serial number of your trailer. **The manufacturer will not accept any direct claims or requests.**

The use of a trailer requires a specific insurance policy in most instances. There is a small exception. Most insurance policies insure a trailer under 751 kg, but only when hitched to the insured vehicle! This means that if you have a problem with the unhitched trailer, the insurance will not cover it!

Make sure you find out more about insurance. One year's insurance for a baggage trailer is often ridiculously cheap. It might be worth taking out a policy.

To ensure that your trailer is always in working order, comply with the warranty terms, and make sure that the required services are carried out by a Trigano dealer. Maintenance varies in accordance with whether it is carried out on braked or unbraked trailers.

IMPORTANT:

In the event of the sale of your trailer, please give this manual to the new owner.

BEFORE TAKING TO THE ROAD

For your own safety, your trailer must be checked by an expert to make sure it is perfectly adjusted and roadworthy before being used for the first time.

These recommendations and instructions are given for your information only, and in no circumstances can the manufacturer be held liable for them.

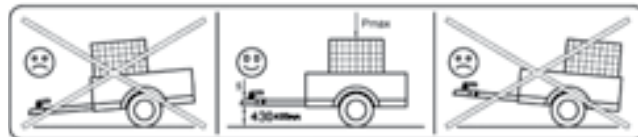
IMPORTANT: On receiving your trailer, our dealer carries out a series of checks in your presence (cf. page 22), to check the most important safety points. This document must be signed by both parties before you leave.

Every time you set off:

- ⚠ **Check your tyre pressure.** Proper inflation ensures good road holding and your tyres will last longer.
- ⚠ **You should also check that the wheels' lug nuts are tightened (torque tightening).**
- ⚠ **Check your coupling,** i.e. the hitch ball and ball receiver (wear, lubrication), as well as the safety features (ball receiver locks on properly, and the positioning of the safety chain).

- ⚠ **Check the load balance.** To do this make sure that the tongue weight (downward weight) exerted on the hitch ball is neither too low (risk of swaying), or too high (limited by the coupling capacity). This weight should represent roughly 5 to 10% of the overall weight of the trailer.

The loading surface must be horizontal when the trailer is hitched.



- ⚠ **Check signalling and lights** Malfunctioning lights can result from a badly hooked up 7 or 13 pin connector, a damaged wire or quite simply a burned out bulb.
- ⚠ **Check that the trailer nuts and bolts are tightened.** Vibrations can sometimes cause them to loosen. (Axles, hitches, side fastenings, etc.)

Never forget the braking distances of a hitch are considerably lengthened and that high speed results in swaying. So drive at a moderate speed.

Take all necessary precautions to ensure that the loading of a vehicle does not result in damage or danger (Art. R312-19 of the French highway code).

The trailer's certificate of compliance and the manufacturer's plate indicate the maximum working load. We strongly recommend that you do not overload the trailer, since this will affect your driving. Overloading could damage the axles, chassis, etc. in addition to being illegal, and it will invalidate the warranty.

Small reminder:



1 m³ sand: 1,800 kg 1 m³ wood: 700 kg

The load must be correctly secured. The sides and tail gate must be closed when driving.

The load cannot be concentrated on an area > 30% of the useful area.

The standard Trigano trailer equipment provides fastening systems on the chassis to make strapping down loads easier. With regard to box vans, see the chapter on Box vans.

The weight of the options and accessories reduces your trailer's payload. Example: a set of mesh sides for a 5 metre floor, weights roughly 140 kg, a spare wheel with its carrier weighs roughly 15 kg.

Make sure that the load's centre of gravity is situated as close as possible to above the axle, and that the load's contact area is distributed as best as possible on the chassis.

The weight of the coupling head falls within the domain of legislation. The Trigano manufacturer's plate indicates the maximum weight allowed on the coupling (beside the figure 0-).

LIDER / SUNWAY		12	
e2*2007/46*0198*00		PV 320 kg	
VN52L248020120118		PTAC 1300 kg	
1300 kg		IxL 1,84x3,86 m	
0 - 100 kg		S 7,10 m2	
1 - 750 kg			
2 - 750 kg			
		32480480201200117	

Trigano trailers comply with the ECE / 55R regulations and are designed in such a way that the height of the trailer coupling is between 395 mm and 465 mm (height from the ground at mid-ball). - heights for adjustable drawbars listed in the commercial catalog.

An incorrect coupling height can result in the axles wearing prematurely, particularly double axles. A coupling that is too low can cause the load to be transferred to the forward axle. A coupling that is too high can cause the load to be transferred to the rear axle.

Avoid excessive stress due to unreasonable or inappropriate conduct. Avoid sudden loads and shots on the axle (axles). Adapt your speed to the load and the road.

It is in your best interest to carry out regular maintenance on your trailer. At the end of the catalogue we provide a service record book for your trailer. In addition, your warranty is invalidated if you do not follow the maintenance recommendations and user instructions. Any intervention on the safety systems (braking, coupling and wheels) must be carried out by a professional.

1 Storing your trailer

Your trailer must be stored in a well-ventilated dry place, protected from the weather. Trailers should be parked in such a way as to avoid water stagnating in the trailer. For boat trailers, these should be rinsed completely and the mechanisms should be lubricated before wintering.

Do not tighten the handbrake when parking for long period of brake linings may seize up

Store your trailer empty or prop it so as to unload the axle (s) to prevent damage

2 Maintenance of galvanized parts

It is only after oxidation that the galvanizing of parts provides a protective barrier against rust. This can be seen from the matt appearance of these. Galvanizing is subject to acid and saline attack. So you need to clean your trailer with fresh water after every transportation on roads covered with snow, fertilizers and other acid or saline substances. Traces of white rust run-outs will appear. These are normal and superficial. They do not alter the protection of your trailer and are not a valid reason for claiming on your warranty.

3 Looking after aluminium parts

They do not need any particular maintenance and can be cleaned with a high-pressure cleaner.

4 Cover maintenance

Trigano covers are made of fibre-reinforced PVC. They are quick to clean. When folding and unfolding the cover, make sure that the buckle does not tear the cover. White marks can appear on the folds of a cover stored for a long time. Make sure that you fold your cover correctly and that it is kept dry.

5 Wooden floors and sides

Trigano's wooden floors and sides are made of multi-ply laminated wood. This high quality wood does not require any maintenance. Wood is a material that absorbs moisture. This material can change shape over time causing possible screw breakages or microfissures. Over the years and due to bad weather, the wood can become matt. When storing your trailer, make sure that no water stagnates on the wood, and that you do not store wet substances inside it for too long. This could quickly damage the wood.

6 Panels

Even on a short trip, always close all 4 sides. They must be present to prevent weld break panels and damaging the frame.

7 Mesh extensions

Even during a short journey, always close the full set of mesh extensions. The 4 extensions must be present to avoid the lateral set from becoming unwelded and possibly damaging the chassis. Trigano's set of mesh extensions is treated against corrosion, due to the manufacturing process. Some sets may have a few deformations that do not alter the function of the mesh extensions in any way.



8 ABS cover

Our thermoformed ABS cover can be equipped with roof rails. The maximum load allowable is 60 Kg for the roof rack kit. It is strictly prohibited to remain in the trailer with the cover closed. There is a danger of suffocation! Before setting off, the cover must be locked using the key to prevent it from opening.



9 High cover

To increase the load volume, Trigrano provides covers at different heights that are adapted to your trailer. The cover must be fully closed before setting off. It is strictly prohibited to drive the trailer with the frame mounted on its own (Danger of losing the bars during transportation). It is highly recommended that you fold the cover correctly after use, to avoid damaging its appearance and prevent any tearing. In no circumstances can Trigrano be held liable in the event of a problem related to a cover that is not part of the Trigrano range.



10 Spare wheel

Incorrect fastening of the spare wheel bracket, can result in the loss of the wheel, and a rupture in the metal sheet or chassis. Every 500 km we advise that you tighten the screws. Spare wheels over 2 years old are no longer suitable for continuous use.

Trigrano reserves the right to supply you with a brand and the various load and speed indications of the running gear, for a given spare wheel size.



11 Ramp

To make loading and unloading equipment easier, Trigano offers a range of steel and aluminium ramps.

For commercial trailers, to make sure that the trailer remains stable and reduce mechanical stress on the axles and chassis, you **MUST** use the drop legs when loading and unloading by ramp. For baggage trailers, the rear side acts as a support.

Below you will find a few instructions you should follow.

Before loading/unloading

- Position legs or blocks (compulsory).
- Stabilize the trailer and the ramps. It is essential that the noses of the ramps are at the same level and that the loading surface is horizontal
- The distance between the two ramps should be adapted to the passage of the vehicle being loaded.
- Make sure that the vehicle being loaded does not exceed the maximum payload.

When loading/unloading

- To avoid movement of the ramps or damage to them, the vehicle being loaded must be driven slowly making no sudden changes in direction.
- Be careful of movement at the head of the ramp when loading.
- Position the loaded vehicle to comply with the load distribution (maximum weight allowed on coupling).

IMPORTANT: The technical characteristics of the ramps are indicated on the side of the ramps.

The crutches do not touch the ground on purpose because the suspensions are lowered when loading, however the bottom of the crutches must not be beyond 80mm from the ground otherwise provide a wedging.



12 Jockey wheel

Check that this works by turning the wheel on itself. If necessary, lubricate the spindle. Do not manoeuvre the loaded trailer on the jockey wheel, since this could prematurely damage it.

Some jockey wheels have a lubricator. Good lubrication is essential for it to work properly!

If the jockey wheel is held by a collar, be sure to regularly lubricate the clamping handle

13 Hydraulic tipping

For prolonged storage outdoors, the hydraulic cylinder elements must be in their retracted or lubricated position. The rod seals and scraper ensure that the cylinder is watertight. The cylinder pistons must remain clean to avoid premature wear of the scrapers which would result in oil leakages.

If you have any problems when tipping, completely down to the trailer before looking the causes, same recommendation when working on the hydraulic system

It is forbidden to tipper on ground sloping more than 1%.

You should check the hydraulic oil level at least once a year. The oil recommended by Trigano is H46 type of hydraulic oil. Respect the level indicated on the tank or fill it completely if there is no marking. For hand pumps, it is recommended to fill 90% of the maximum volume, in order to prevent reflux during the descent of the cylinder

If you encounter the slightest problem when tipping, bring the bed down completely before looking for reasons. The same recommendation is valid for an intervention on the hydraulic system.

BE CAREFUL to chock the tipper to guard against accidents when operating with the tipper up.

On manually operated pumps, the decompression valve is a fragile part. Hand tightening is sufficient. If tightened too hard, this can damage the pump housing and make this unusable. Remove the pump lever from the support during transportation. Lifting the cylinder can apply a number of pump strokes to prime.

On electric pump: an end security locks lifted the trailer up. Downhill is then possible after several seconds. Do not force the remote control at the end of the lifting stroke to avoid blocking of the cylinder in the up position.

2 types of chargers: if it is under the trailer, the charger is already connected with the battery: remains to connect it to a 220V outlet. If the charger is in a bag: connect to the remote control and plug it into a 220V outlet. The charger is not waterproof, be sure to store it in order to protect.

You must charge the battery 13 hours when it is empty for it to be loaded at max. Recharging the battery depends on the number of uses. The customer can use the system between 30 and 100 cycles according trailer model. These are deep cycle batteries allowing a high capacity use.

WARNING: do not force the remote control when lifting as you reach the end. This will avoid the cylinder getting stuck in its up position.

14 Axles

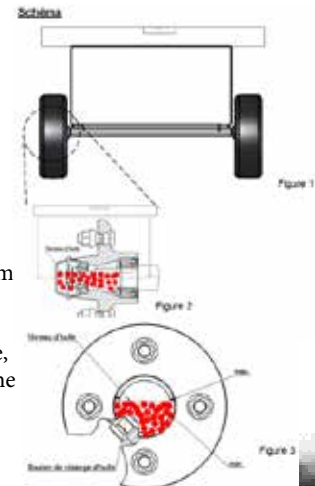
The coupling should be cleaned and lubricated at regular intervals. The rubber mounting of the axle requires no maintenance. Overloading can result in the sinking or premature wearing of the axle. Get the bearings checked every year at a recommended workshop. Tapered roller bearings need to be lubricated and adjusted periodically (minimum every year). Cartridge bearings do not need any maintenance.



15 Oil bath axles

For the oil filled axles, an oil change should be carried out every year. Boat trailers markets specific oil (ref: S31001). Trigano disclaims any liability if another oil is used. Please maintain the correct oil level to ensure correct operation. For oil-filled axles, Trigano has specific instructions, which will help you maintain your axle perfectly watertight.

Parking the vehicle on a surface Horizontal (Figure 1). Adjust the position of the wheels in such a way that the pairs of marks (min / m are perfectly horizontal (Figure 3). The oil level is Is included between these markings min and max. If this is not the case, will need to be added or removed by using the oil drain bolt as to obtain the correct level.



Check the bearing play: Put the car on jack and secure it using wedges so that it is kept stopped. Turn the wheels manually and shake them. If the game is perceptible in doing this, it is necessary to contact a professional Lider network.

16 Drum Braked Axles

The lubrication points should be greased once a year, including tapered roller bearings. Be careful about the tightening torques. If your trailer is equipped with an axle with tapered roller bearings, have these bearings checked every year by a workshop skilled at lubricating and adjusting them.

The hubs should never be placed in water, failing which the brakes will jam.

In the event of the hubs being immersed, they must be rinsed thoroughly with fresh water. This rinsing is made easier by the kit that can be adapted to braked boat trailers.

Do not neglect all the other braking elements such linkage, wires, springs, etc. Pay particular attention to lubricating these elements.

IMPORTANT: Whenever possible, avoid cleaning the bearing hub with a high-pressure cleaner. If such cleaning is really necessary, all the components must then be lubricated and / or oiled. It will also be necessary to check if all the seals of the wheel bearings are still in good condition. After contact with salt water or chemical cleaning agents, it is advisable to rinse all components of the brake with fresh water.

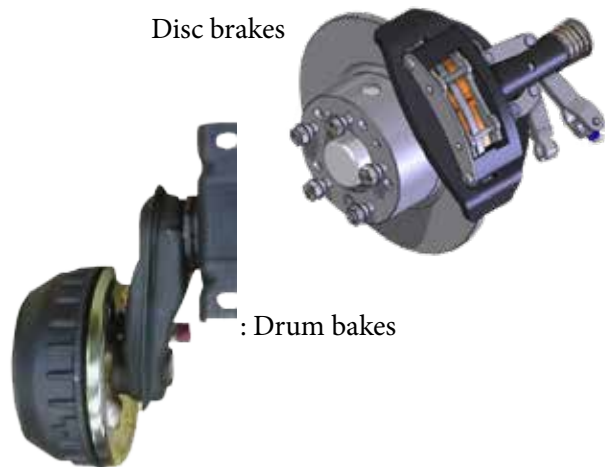
IMPORTANT: Setting / adjustment of the disc brakes must be carried out by a Lider professional.

17 Disc braked axles

After immersing the hubs, they must be rinsed thoroughly with fresh water. The rinsing of the wires after the immersion of the trailer in water is very difficult. Think of rinsing the braking system and oiling or lubricating the brake cables every 6 months to prevent corrosion.

Checking the brake reaction threshold: the tracted vehicle is parked, applies the parking brake and gently push the vehicle in the back-ground until the park lever reaches its most distant final position. Then slide the coupling head / pull rod into the inertia brake. (This may require some effort depending on the model of braking you have). The traction rod must spring up all the zero position thanks to the gas contained in the damper. If the exit lasts more than 30 seconds you need to review a professional Trigano network.

If you can lease the connecting rod more than half when the hand brake is revised immediately a professional Trigano network.



Torque tightening of wheel axle coupling elements:

Link	Size	Screw grade (min)	Lug nut grade (min)	Tightening torque (in Nm)	Wheel tightening torque (in Nm)
Fixed assembly	M10	8.8	8	40-50	74
	M12	8.8	8	70-80	120
	M14	8.8	8	115-140	120
	M16	8.8	8	180-200	
Tight fit pivot	M10	8.8	8	20-40	
	M12	8.8	8	20-60	
	M16	8.8	8	140-150	

IMPORTANT: In the event of dismantling, any brake nut should be replaced by a new one.

Tyre pressures:

Description	Pressure in bars	Description	Pressure in bars
3.50x8	3	165R13C	4.5
5.00x10	3.5	165/70R13	2.5
4.00x8	chariot 5.2	175/70R13	2.7/
4.00x10			chariot 3.5
135R13	2.2	185/70R13	2.7
145R13	2.5	185R14C	4.5
155/70R13	2.5	195R14C	4.5
155R13	2.2	195/50R13C	6.5
155R13C	4.5	195/55-10C	6.5
155/70R12C	6.2	195/70R15C	4.5
165R14C	4.5		

18 Signals and electrics

Before setting off, check that your lights are working properly. The immersible boat trailer (Fast) range is fitted with watertight lights. Refer to the watertight lights user instructions provided with this catalogue. Be careful to check your vehicle connector system, and make sure that this protects the vehicle harness. Trigano cannot be held liable for vehicle breakdowns linked to an electrical malfunction of the trailer. You must have a fuse at the coupling outlet.

LED specificity: if the lights do not come on with your vehicle, it may be equipped with an unsuitable beam for this new technology. An additional electronic box is available in the Lider-Sun Way network.

19 Wheels

Check the pressure of your tyres regularly (see table). In the event of the trailer being immobilized for a long period, it should be raised using a jack to avoid possible deformations. When changing or tightening the wheels again, tighten the lug nuts in a criss-cross pattern with a torque wrench. The wheel lug nuts must be checked before every trip.

Contact with salt or an acid substance on the road or in the water can result in traces of white or red rust appearing. A good rinsing of the rim, guards against the appearance of rust, which does not alter the product characteristics in any way.

IMPORTANT: Before and after use of the trailer and every 500 Kms, check the tightening of the main elements (hitch, axles, wheels, etc.)

20 Brake cable

To guarantee that your brakes work properly and to reduce the possibility of prematurely worn brake linings due to malfunctioning, Trigano always recommends that you change your cables regularly.

For the disc brake type of braking system in the boat trailers range, lubrication is essential every 6 months at least, due to their being immersed in water. CAREFUL rinse the brake system thoroughly!

21 Tipping handle

Only tip the trailer if this is coupled and the parking brake is not on. If the parking brake is on, during tipping, the parking lever automatically moves backwards. When the trailer is level again, the lever which is now blocked cannot return to its normal position, which damages the lever fastening.

Be careful not to cause shock to the way down, it could damage some parts.

2-axle trailers cannot be tipped without a hydraulics kit (kit available on option depending on model).

22 Beach dolly

Prohibition to travel on public roads. On beach or track, the maximum speed is 10 km / h

23 Stainless steel parts

Stainless steel parts do not require any specific maintenance. Do not use an impact wrench to tighten and untighten the stainless steel nuts and bolts.

24 Nuts and bolts

Salt is corrosive for all the trailer's nuts and bolts, screws, rings, nuts, etc. It is therefore important to rinse the trailer with fresh water to prevent corrosion. For certain ranges of their products, Trigano uses stainless steel nuts and bolts.

The tightening torques are indicated on page 11 of this manual

25 Adjustable drawbars

Coupling heights are listed in the commercial catalog. The drawbar must always be adjusted so that the loading surface is horizontal

Adjustment method:

Remove the safety pin from the handle

Unscrew the locking lever fully

Move the coupling device to the desired height using the handle

Make sure that the grooves of the adjustment notches engage correctly

Make sure that the brake control is perfectly aligned horizontally with the ground

Tighten the locking handle and secure it with a hard rubber hammer

Replace the safety pin

26 Winch

Winching with cable : make sure that the cable is not over stressed or in a position that might damage it. It must remain in the pulley system and must not damage the trailer's bodywork. The cable under a load must be wound such that a minimum space of 2 cable diameter remains on the drum flange. Overloading the winch and damaging the cable will be avoided.

The nominal capacity is given for a slope of 30%. The capacity is greater in the first winding layers than in the last layers (see indications on winch)

It is necessary to leave 5 turns of cable or strap on the winch to avoid disconnecting the cable or the strap and thus avoid an accident.

The winching must be done in line, an angle of 4 ° max is tolerated otherwise there is a risk of degrading the winch.



During loading, you do not need to winch the load right up to the stop. The tipping can be removed and the movement of the load to the stop carried out horizontally.

Make sure that the winch is securely attached to its base and use a correct anchorage when hooking the winch to the load. After winching, secure the load. Do not rely on the winch to stabilize and maintain the loaded equipment.

For your safety, the inspection and maintenance must be carried out regularly by a professional of Trigano network.

Double speed: position the crank according to the desired speed in accordance with the indications on the winch.

Disengaging: always remove the crank before this operation. If the red wheel is present, then push it well before turning it to avoid degradation, otherwise a metal wheel must be handled. Do not disengage when a load is hooked.

In the case of unloading without load using the crank, the clutch may not be engaged, to force the locking it is then necessary to turn the handle in the winding direction until the «click» or pull a blow. dry on the strap, cable or rope until it stops.

WARNING Do not stay in the line of the cable or the strap during winching to avoid the blow of «whip» in case the winch breaks.

Do not oil or grease the brake mechanism

27 Box van

To optimize your driving, make sure that your load is properly distributed. It is very easy to place the load against the forward partition, and this may not comply with good load distribution. The load must be made secure. Trigano provides you with cargo control tracks. When tightening them make sure you do not deform the body, or you could risk deteriorating the structure or damaging the plywood.

If you must load or unload, you must systematically be hooked up with your rear legs in the down position. Transporting animals or people is prohibited.

BE CAREFUL of the internal dimensions of your body, particularly for restricted passageways (i.e. toll gates, car park entries, etc.).

To maintain the van's watertightness, we advise you against washing your van with a high-pressure cleaner.

The van has a flat roof. When parked outside, make sure that you leave it on an incline using the jockey wheel or the rear drop legs, to avoid water stagnating.

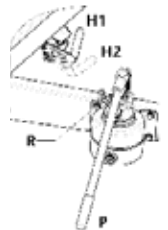
28 Lowered plate

LOWER :

1. Pump (P) until you feel an effort on the lever
2. Unlock the handle (H1 -> H2)
3. Maintain the H2 position and open the valve (R)

UP :

4. Close the valve (R)
5. Pump (P) until the handle locks (H1 -> H2 -> H1)



IMPORTANT :


The technical documentation of the elements mounted on our trailers can be requested from the professionals of the Trigano network.

HOOKING UP

IMPORTANT: The ballbox or coupling head must only be used with Ø 50 mm balls in accordance with Directive 94/20 / EC.

1 Bring your towing vehicle as close as possible to the trailer. Present the coupling head over the hitch ball on the towing vehicle.

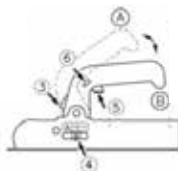
2 Open the ball clamp coupler (position 1) and lower the trailer until the ball clamp is locked on (position 2).

Control : It is possible to check as follows whether the coupling head is correctly attached to the traction vehicle: the locking lever spout must be visible on the operating lever (3) and the profile rivet is located in the (Green /  / +) of the display on the side of the slot (4) / If the profile rivet is outside this area of the display, check the position of the coupling head or If necessary, repeat the hooking procedure. If the ball joint is worn (Ø 49 mm), the profile rivet is located in the «CAUTION» area of the display.

Do not forget to lift the trailer's jockey wheel or to remove it to avoid loss or theft.

Release the parking brake (for braked trailers).

3 Plug in the electric connection on your car. Check that your lights are working.



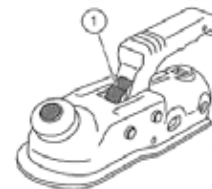
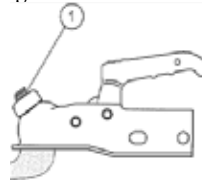
IMPORTANT: Check that your trailer is hooked up properly before setting off and that the cable or chain is connected properly. For good road holding, the coupling height must be observed: 430 ± 35 mm in relation to the ground.

Trailers are provided with a secondary attachment (trailers not braked) or a safety cable (braked trailers) to be installed before departure.



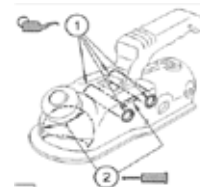
OVERRUN DEVICE

The coupling head is an integral part of the trailer drawbar. It must only be used in the fully assembled and controlled system to couple the trailer to the towing vehicle. In this case, observe the permissible weights and loads. The switch-on is OK when the indicator (1) appears or the rivet is in the green / OK area



Maintenance :

Oil (1) and grease (2) receiving sphere of ball joints and support points



UNHOOKING

- 1 Unplug the electric connection on your car.
- 2 Activate the parking brake if your trailer is braked, or use wheel blocks. Lift the coupling latch and raise the coupling to unhook the trailer from your car (use the jockey wheel if needed).

WARNING: Do not get your fingers caught in the open hitch clamp! The slightest pressure on the cap can trigger the locking mechanism and result in wounds to hands.

Do not manoeuvre the loaded trailer on the jockey wheel. Replace the hitch ball in the event of wear (Diameter < 49 mm). Lubricate the joints every 6 months.

If the safety cable is worn or twisted, replace it before using the trailer again.

NOTE: When parked with your trailer on the road, your tail lights must remain visible. Otherwise, the other road users must be warned of the presence of vehicles using a roadside warning triangle required by regulations.

When you park your trailer for a long period (>2 months) we recommend that you block the wheels and release the handbrake to prevent the brake shoes from jamming against the drum. When you park in reverse, it is recommended that you make a forward manoeuvre of roughly 20 cm, to decompress the coupling head jack.

Before leaving, you must lift the jockey wheel fully by turning the handle as far as the stop. For models with a tightening collar, you will need to lift the body of the jockey wheel then tighten the collar and bolt. Do not manoeuvre the jockey wheel if the trailer is loaded.

The coupling parts are safety parts. It is mandatory to have them checked and replaced in Trignano network.

TROUBLES :

- If the ball-and-socket housing does not lock correctly:
 The ball joint $\varnothing > 50$ mm: replace the coupling ball on the towing vehicle.
 The bearing load is insufficient: press downwards by hand on the coupling head.
 The coupling head is dirty or stuck: clean and lubricate the coupling head and replace if necessary.

- If there is too much clearance between the ball and the coupling ball or if the indicator light is not ok:
 The ball ($\varnothing < 50$ mm) or the coupling head is worn: replace the coupling ball on the towing vehicle.
 The seals are worn: contact your seller.
 Found distortion: have repaired in the Trignano network .

- If it is impossible to unhook the trailer:
 The trailer and the towing vehicle are not at the same level: place them in the same traffic direction and unhook
 The coupling ball is oval : to be replaced.

In the event of a breakdown is not described in this manual, contact a professional Trignano network seller and do not move the trailer.

CHANGING A LIGHT BULB

BEAM NO. 7 CONTACT PLATES+1 with anti-fog light cut-off

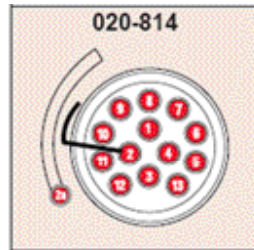


(Seen from plug side)

- 1 Left indicator - **yellow**
- 2 Fog - **blue**
- 3 Body - **white**
- 4 Right indicator - **green**
- 5 Right side light - **brown**
- 6 Stop light - **red**
- 7 Left side light - **black**
- 8 Fog light return - **grey**

Complying with European standards, our trailers are equipped with seven-pin plugs for trailers weighing less than 750 kg, and thirteen-pin plugs for trailers weighing over 750 kg.

13 PIN BEAM (Jaeger) with anti-fog light cut-off



(Seen from plug side)

- 1 Left indicator - **yellow**
- 2 Rear fog light - **blue**
- 2a Fog light return - **grey**
- 3 Body (for contacts 1 to 8 of the circuit) - **white**
- 4 Right indicator - **green**
- 5 Right lantern - **brown**
- 6 Stop light - **red**
- 7 Left lantern - **black**
- 8 Reversing light and/or reversing system for inertia brake system - **orange**
- 9 Electric power supply (steady plus) - **green**
- 10 Positive charge line for battery in the trailer - **red**
- 11 Body (for contact 10 of the circuit) - **white**
- 12 Not yet allocated
- 13 Body (for contact 9 to 12 of the circuit) - **white**

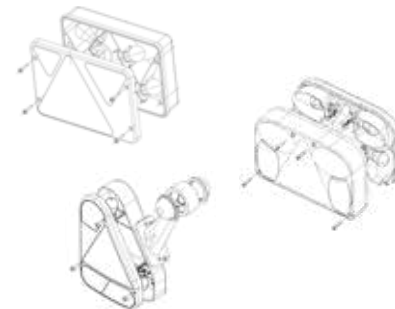
LED : Watertight fire: contact a network professional. When working on an unsealed fire, ensure that the rear connector is positioned elbow down.

How to change light bulbs: (except LED)

Below you will find instructions enabling you to change light bulbs on Tri-gano trailers. boat trailer watertight lights require specific recommendations. All the instructions related to the watertight range are enclosed with this advice.

For the rear lights:

- 1 Remove the case: remove the screws using a screwdriver.
- 2 Replace the faulty bulb.
- 3 Reposition the case and screw it back on.



Bulb references by type of light

P21W / PY21W	Indicator – Reverse - Fog
P21-5W	Side light and Stop
T4W	Thousand outline markers
R5W / C5W / P5W / R10W	Registration plate light
W5W / C5W	Side lights

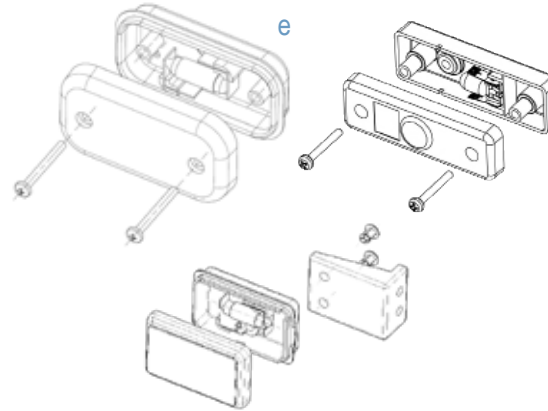


NOTE: When replacing light bulbs, make sure that the light bulb pins are well inserted into the light bulb socket.

This light is representative. The installing steps are valid for all the tail lights.

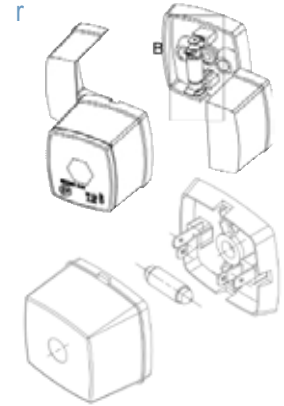
For the rectangular forward side lights e

- 1 Remove the case: remove the screws using a screwdriver.
- 2 Replace the faulty bulb.
- 3 Reposition the case and screw it back on.



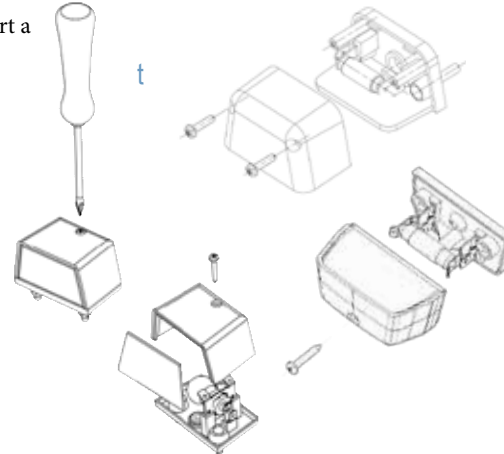
For the square forward side lights r

- 1 Remove the front and internal cases.
- 2 Replace the light bulb
- 3 Reposition the internal and front cases.



For the thousand outline markers s

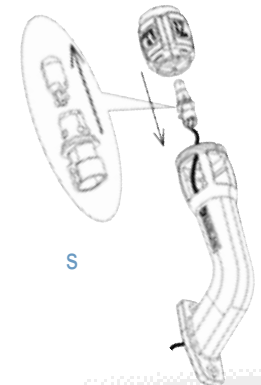
- 1 Remove the rubber circle.
- 2 Open the rubber sides, remove the cases and turn the bulb part a quarter.
- 3 Replace the faulty bulb.
- 4 Reassemble all this.
- 5 **WARNING:** Red case to the back and white case to the front.



For separate registration plate lights t

- 1 Remove the case: remove the screws using a screwdriver.
- 2 Replace the light bulb
- 3 Reposition the case and screw it back on.

N.B.: For some registration plate lights, you will need to dismantle the light on the chassis.



FAST RANGE LAUNCHING (IMMERSIBLE)

When launching your boat a great number of parts are moving (boat, strap, etc.) Therefore, you must be extremely vigilant in avoiding damage to equipment and personal injury in relation to yourself and others.

WARNING : This range of trailer may be immersed in water, with the exception of the jockey wheel, braked coupling and the electric connection box located at the front of the trailer. Therefore it is highly recommended that you remove the jockey wheel from its bracket each time you use the trailer.

Before setting off:

Secure your boat to the trailer. Rotate the registration plate holder and make sure that your lights are working properly before leaving. Test your brakes to make sure that they are working properly.

Warning: read the instructions for the axles, couplings, watertight lights and winches, to ensure that your trailer receives proper maintenance.

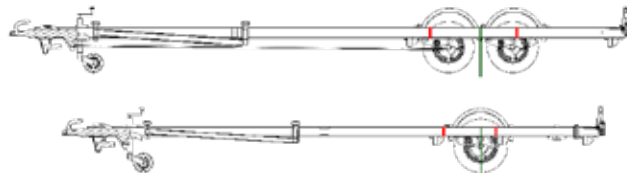
Boat adjustment:

Pay heed to the maximum weight on the coupling. For this, the position of the boat's centre of gravity is very important. The manufacturer's plate indicates the maximum allowable weight on the hitch in 0 position.

In the present case, the hitch weight is 100 kg max.
Axle weight 1 = 750 kg max.
Axle weight 2 = 750 g max.:

LIDER / SUNWAY		e2*2007/46*0198*00		VN52L248020120118	
0	-	1300	kg	PV	320 kg
1	-	100	kg	PTAC	1300 kg
2	-	750	kg	bxL	1,84x3,86 m
		750	kg	S	7,10 m2
				32480400201206117	

Warning: when adjusting your trailer, make sure that the wheel axle in the middle of the tandem is between the two chassis markings.



Launching

- 1 Unstrap the boat.
- 2 Bring the trailer close to the water.

Before any attempt at launching, you must make sure that the launch slipway is suitable. The angle of the slope must be greater than or equal to 13% for non-brittle trailers

- 3 Rotate the registration plate holder.
- 4 Unhook the boat from the winch.

Be careful of possible movement when the boat is unfastened. Make sure the boat is secured with a hawser or have a crew member on board before launching the boat.

- 5 Back the trailer into the water, then brake in such a way that the boat is freed from the trailer by inertia.

Careful, this launch requires the car to have a good grip on the slipway. Be careful of damp or slippery slipways.

- 6 Remove trailer from the water.
- 7 Rinse the trailer with fresh water after every use.

Removing the boat from the water

Warning. When removing the boat from water, check that:

- The registration plate holder has been rotated.
- When launching or removing the boat, never position yourself between the trailer and the boat or you might get crushed.

- 1 Back the trailer completely into the water. The trailer coupling should not be in contact with the water.
- 2 Approach the boat at a moderate speed.



- 3 Mount the boat onto the trailer.
- 4 Hook up the boat then winch until the bow of the boat reaches the fixed stop on the winch bracket and tighten the strap considerably after making sure that the boat is correctly positioned on the trailer. If the boat is not in position, start this manoeuvre again.
- 5 Remove the boat from the water.
- 6 Rinse the trailer with fresh water after every use. Pay particular attention to the braking system.

Before setting off

- Secure your boat to the trailer and make sure that the lights are working properly.
- Rotate the registration plate holder before taking to the road.
- Oil or lubricate the brake cables every 6 months to prevent corrosion if they are fitted with a grease nipple.

BOAT TRAILER RANGE LAUNCHING

Launching

When launching your boat a large number of parts are moving (boat, strap, etc.) Therefore, you must be extremely vigilant in avoiding damage to equipment and personal injury in relation to yourself and others.

IMPORTANT: Do not launch or remove the boat from the water unless the trailer is hooked up.

- 1 Remove the light strip and place the electric plug in the socket if the trailer has one. In all events, do not leave the plug behind the trailer, since it is likely to end up in the water when you are launching your boat.
- 2 Before any attempt at launching, you must make sure that the slipway is suitable for the boat and the trailer.
- 3 Back the trailer into the water until the tyres are in the water.

Unfasten the boat.

- 4 To lower the boat: winch without ratchet.

WARNING: In the case of a tipping model, be careful when locking and unlocking, and re- locking the trailer before parking it.

IMPORTANT: Never rush lowering the boat. Let out the winch gently to have full control of launching the boat.

You must always hold the winch handle to prevent it from running out of control.

- 5 Roll the strap, remove the trailer from the water, replace the light strip, the plug and park the trailer.

WARNING: When launching, never allow the rims and brake drums to go into the water, to prevent any premature rusting of the trailer's wheels and brakes.

Removing the boat from the water

- 1 Remove the light strip and place the electric plug in the socket if the trailer has one.
- 2 Before any attempt at removing the boat from the water, you must make sure that the slipway is suitable for the boat and the trailer.

Back the trailer into the water until the tyres are in the water.

- 3 To mount the boat:

Align the boat behind the trailer.

Unroll the strap until hooked to the boat's mooring ring.

Winch until the bow is presented on the first rollers to the rear of the trailer.

Continue to winch until the bow of the boat reaches the fixed stop on the winch bracket and tighten the strap considerably after making sure that the boat is correctly positioned on the trailer. If the boat is not in position, start this manoeuvre again.

WARNING: When launching or removing the boat, never position yourself between the trailer and the boat or you might get crushed.

- 4 Before setting off:

- Secure the boat.
- Replace the light strip and reconnect the electric plug. Make sure the lights are working properly before setting off.
- Test your brakes to make sure that they are working properly.

WARNING: In the case of a tipping model, be careful when locking and unlocking. Unlock the trailer before parking it.

STANDARD SERVICING INTERVALS

Handover of trailer		Six months or 1,000 km		Every year or 5,000 km		After 4 years or 40,000 km	
AQ028 Customer Delivery Sheet. Pages 24 and 25	To be filled in and signed by the customer	Wheel lug nuts*	C + Re	Wheel lug nuts	C + Re	Wheel lug nuts	C + Re
		Tyre	C	Tyre	C	Tyre	C
		Tyre pressure	C	Tyre pressure	C	Tyre pressure	C
		Coupling	C + Re + G	Coupling	C + Re + G	Coupling	C + Re + G
		Hubs		Hubs	C	Hubs	C
		Bearings	C + Re + G	Bearings	C + Re + G	Bearings	Rep
		Electricity Lighting	C	Electricity Lighting	C	Electricity Lighting	C
		Safety cable	C	Safety cable	C	Safety cable	C
		Latches Locks	C	Latches Locks	C	Latches Locks	C
		Sides	C + Re	Sides	C + Re	Sides	C + Re
		Nuts and bolts (retightening)	C + Re	Nuts and bolts (retightening)	C + Re	Nuts and bolts (retightening)	C + Re
		Brake linings		Brake linings	C	Brake linings	C
		Braking system	C + Re	Braking system	C + Re	Braking system	C + Re
		Brake calipers	C + G	Brake calipers	C + G	Brake calipers	C + G

Check - **Retighten** - **Replace** - **Grease** (The replacement of worn parts will be judged by a professional)

* Retightening is mandatory after 100kms

STANDARD SERVICING INTERVALS

<p style="text-align: center;">Handover of trailer</p> <p style="text-align: center;">Trigano Dealer Stamp</p>	<p style="text-align: center;">6 Month or 1,000 km Service</p> <p style="text-align: center;">Trigano Dealer Stamp</p>
<p>Date:</p>	<p>Date:</p>
<p>Workshop and customer signature</p>	<p>Workshop and customer signature</p>
<p style="text-align: center;">Annual or 5,000 km Service</p> <p style="text-align: center;">Trigano Dealer Stamp</p>	<p style="text-align: center;">Annual or 5,000 km Service</p> <p style="text-align: center;">Trigano Dealer Stamp</p>
<p>Date:</p>	<p>Date:</p>
<p>Workshop and customer signature</p>	<p>Workshop and customer signature</p>

STANDARD SERVICING INTERVALS

<p>Annual or 5,000 km Service</p> <p>Trigano Dealer Stamp</p>	<p>Annual or 5,000 km Service</p> <p>Trigano Dealer Stamp</p>
Date:	Date:
Workshop and customer signature	Workshop and customer signature
<p>Annual or 5,000 km Service</p> <p>Trigano Dealer Stamp</p>	<p>Annual or 5,000 km Service</p> <p>Trigano Dealer Stamp</p>
Date:	Date:
Workshop and customer signature	Workshop and customer signature

1 Wheel check

- Tighten the 4 or 5 lug nuts on the right and left wheels with a 4-way lug nut wrench and check the tightening torque with a torque wrench.
- When tightening the wheels, check the convex side of the nuts are against the rims: incorrect mounting can cause the wheel to loosen and damage the rim.
- Check the wheel pressure.
- Check tyre coherence (they must be the same brand, speed rating, load rating and even the wear on the same axle).

2 Check that all the nuts and bolts are tightened

- Inspect the sides (the 4 sides).
- Inspect the 2 mudguards.
- Inspect the underside of the body (nuts and bolts, clipped electric cables).
- Check that the drawbar is properly attached beneath the body (nuts and bolts).
- Check that the axle is properly attached beneath the body (nuts and bolts).
- Inspect the coupling head.
- Inspect the jockey wheel (if provided).
- Position the coupling head on the ball.

3 Check the wiring harness

- Test the 2 side lights
- Test the left and right indicators
- Test the stop lights and fog lights
- If necessary, test the reversing light

4 Other

- Check that any possible optional accessories are properly attached (covers, extensions, etc.)
- Lift the jockey wheel (if provided): it should never touch the ground when towing.
- Fit the registration plate in accordance with regulations.
- Inform the customer that he must retighten the wheel lug nuts after roughly twenty kilometres and then at regular intervals (every 500 km approx).
- Inform the customer of the need to check and retighten if needed ALL the nuts and bolts, when the first 100 kilometres have been driven, since the road vibrations could exceptionally cause accidental loosening.
- Every 500 km, check the tightening of the main elements (coupling, axle, wheels, drawbar).
- For trailers frequently being driven long distances, a redistribution of lubrication may be needed: behind the axle plug which protects the bearings.
- Overloading may result in premature wearing of the axle(s).
- In the case of braked trailers, carefully read the notices accessible on the Lider extranet.
- Within the context of braked trailers, please read the user and maintenance instructions you were given carefully.
- Explain (or re-explain) the notions of GVWR, PL, GCWR, Category B or E driver's licences. Under no circumstances can any claim be made against the seller or manufacturer for any non-compliance with the technical restrictions linked to the trailer and the towing vehicle. The customer alone is responsible with regard to the rules of the road.
- In addition, it is highly advisable to drive smoothly, and be more attentive, and particularly to reduce speed when towing a trailer (significant inertia when braking).

EVERY TIME YOU SET OFF, CHECK:

- The lights and signalling.
- The locking of the coupling.
- The jockey wheel or drop leg has been lifted.
- Tyre pressure: for a heavy load or a long journey, increase the usual tyre pressure by 0.5 bars.
- The load: is secure and strapped, the closest possible to the floor, with a good distribution of weight (5 to 10 % on the hitch).
- The weight of the load should never exceed the trailer's payload.

Reminder: 1 m³ of sand "weighs" approximately 1,800 kg or 1 m³ of wood "weighs" approximately 700 kg.

Warning! The warranty does not apply for trailers that have been subject to:

- Inappropriate or improper use.
- Negligence, accidents, poor maintenance, modification of any sort, or having sustained natural damage.
- The use of accessories not recommended or approved by the trailer's manufacturer.

The trailer is manufactured and approved for a maximum transportation load indicated on the manufacturer's plate.

I received the Trigano trailer, whose serial number is inscribed on the chassis and the manufacturer's plate, in perfect condition. The use of the trailer has been explained to me, or I have waived the explanation, and the reception inspection sheet (see p26-27) has been duly filled in in my presence and handed to me personally before leaving.

Confirming that I have read and taken note of the terms on pages 24 and 25 of the Trigano Manual:

Executed on (date):

Serial No. of trailer:

.....

THE CUSTOMER

THE SELLER

(name and signature)(Name, signature and stamp)

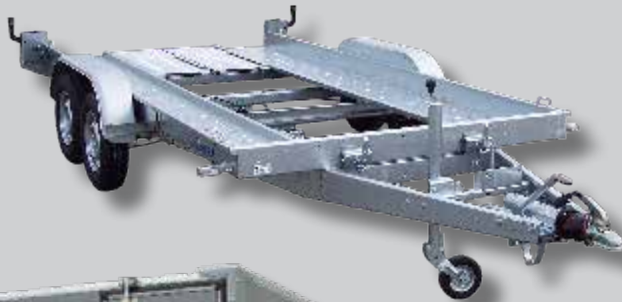
Once completed by the seller and signed by the customer.
This detachable coupon will be stapled to the invoice and kept by
the Trigano distributor.

Lider

TRIGANO

TRAILERS

USER AND MAINTENANCE MANUAL



Your Retailer

