

Sodi

RACING



MAN_Furia_GB_01



Avant-propos

Ce document a été préparé sur la base des spécifications les plus récentes à la date de publication. Sodikart se réserve toutefois le droit d'apporter des changements afin de maintenir sa politique d'amélioration continue de ses produits. Si des modifications ont été effectuées depuis, certaines différences peuvent exister entre le contenu du manuel et le kart que vous possédez.

Le document s'applique à tous les modèles Sodikart et comprend des descriptions sur l'équipement tant de série qu'optionnel. Aussi, vous pourrez trouver dans ce manuel des sections qui ne s'appliquent pas à votre modèle de kart. Les illustrations sont utilisées pour décrire les principes d'assemblage. Elles ne sont pas censées représenter exactement le kart dans le détail.

En cas de problème ou pour toute question concernant votre kart, veuillez vous adresser à votre distributeur ou représentant local, ou bien à la société Sodikart.

Foreword

This document is based on the most recent specifications at the time of publication. Sodikart nevertheless reserves the right to apply changes in order to uphold its policy of continuous improvement of its products. If modifications have been made in the meantime, there may be certain differences between the content of the user guide and the go-kart you own.

The document applies to all Sodikart models and includes descriptions and explanations concerning both the standard and optional equipment. This means that this manual might contain some sections that do not apply to your go-kart model. The illustrations are used to describe the principles of assembly. They are not intended to be an exact, detailed representation of the go-kart.

If you have problems or questions about your go-kart, please contact your local distributor or representative of Sodikart.

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1 - General

1.1 - Warning

A go-kart can be dangerous if is not correctly maintained or used. Read carefully this manual and pay a particular attention to safety warnings and notes.

- Not following the safety instructions of this manual, may involve your liability if an accident occurs.
- Read carefully hints, instructions or warnings following a "notes" or a "warning":



▶ **Indicates a strong possibility of serious personal injury or death if instructions are not followed.**



• **Indicates a risk of property damage if instructions are not followed.**



• *Provides useful information.*

- The warnings and precautions contained in this manual cannot cover every possible risk related to the maintenance, or lack of maintenance, of a go-kart.
- In addition to the messages given, it is important to apply good judgement and apply the basic principles of mechanical safety.
- In case of any doubt on the way a particular operation of maintenance must be made, ask for advice from a more experienced mechanic.

1.2 - General precautions

- Keep the go-kart in it's original state.
- Do not modify the go-kart.
- Use original Sodikart parts only.
- For the safety and reliability of the go-kart, it is important to carry out the appropriate maintenance and repairs.
- If toxic or flammable products are used, make sure that the places are ventilated well and that all the instructions of the manufacturer of these products are respected.
- Never use petrol as a substitute for cleaning solvent.
- Check all hoses and mountings in the brake system to ensure that there are no leaks.
- Ensure that the safety stickers are present and in good condition.
- Put in order the parts that must be reused, to be able to reassemble them in the correct manner.
- Use adapted or special tools for every operation if specified.
- Check parts cleanliness before reassembly. Apply grease if needed.
- Use only lubricants, glues or specified waterproof products.
- Replace by new parts : O' rings, self locking nuts, split pins, circlips, and other specific parts after every disassembly.
- Clean the contact areas from any trace of material, before reassembling the parts.
- Tighten up all fixations bolts to the specified tightening torque using a torque wrench.
- Remove any trace of oil or grease from all threads.

- Check the correct tightening of all parts and their functionality after reassembly.
- To protect the environment, comply with all legal requirements for the disposal of used fluids, batteries, and tyres.
- To protect nature and the environment, dispose of used parts in accordance with regulations.

1.3 - Safety instructions

The kart has been designed in accordance with the pending rules of the FFsa in force, which ensures an optimum safety in normal conditions of use.

Its high speed and performances imply a proper maintenance.

For your safety and the one of other pilots, please thoroughly respect:

- The assembly instructions.
- The adjustment recommendations.
- The maintenance plan.



- ▶ **The SODI chassis is designed for safety and reliability in normal conditions of use. Before using it, please read this manual and carefully follow the instructions. By not doing so, you might be exposed to a risk of severe, even fatal injury, and your kart might suffer damages.**
- ▶ **The SODI chassis can only be used on an approved track and by a driver who is in possession of a valid membership card of the kart's federation of his own country.**
- ▶ **Prior to going on the track, please check all points related to safety.**
- ▶ **In order to avoid fire, put the kart at least one meter away from the buildings. Never leave inflammable objects close to the kart.**
- ▶ **If fuel has been poured, wipe and wait for vapours to dissipate, before starting the kart.**
- ▶ **Kids and domestic animals have to be kept away from the kart and the track.**
- ▶ **Never let anybody use the kart without making sure before that the driver has knowledge of all the safety instructions and that he wears the adequate protections.**
- ▶ **Driving prohibited for a pilot with health problems (for example: heart problems).**
- ▶ **Driving prohibited for a pilot who having a strange behaviour or under drugs or alcohol.**

1.3.1 - Meaning of the flags



Green flag

Do not apply the throttle before this flag is out



Black flag

Driver is to proceed to Pit Lane immediately, wait for staff instructions.



Blue flag

A faster driver is behind you. Move off the ideal driving line.



Yellow flag

There is a dangerous situation ahead of you. Ease off the throttle and do not pass. This flag will be used in combination with the warning lights along the track.



Red flag

Trouble on the track - Drive slowly. Drive to Pit Lane immediately,

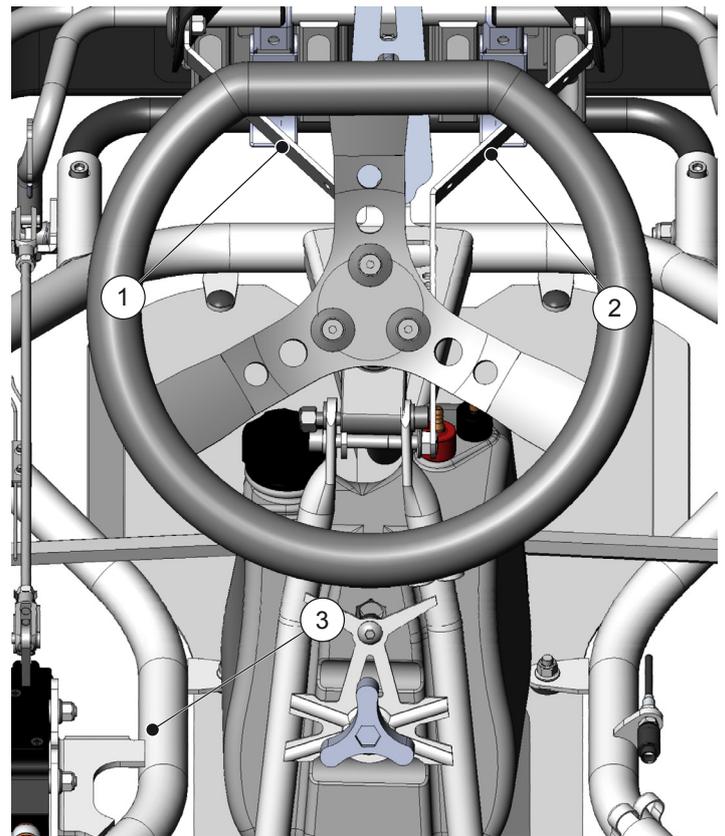


Checkered flag

The driving session is finished. Enter the pit-lane slowly.

1.3.2 - Safety stickers

Location



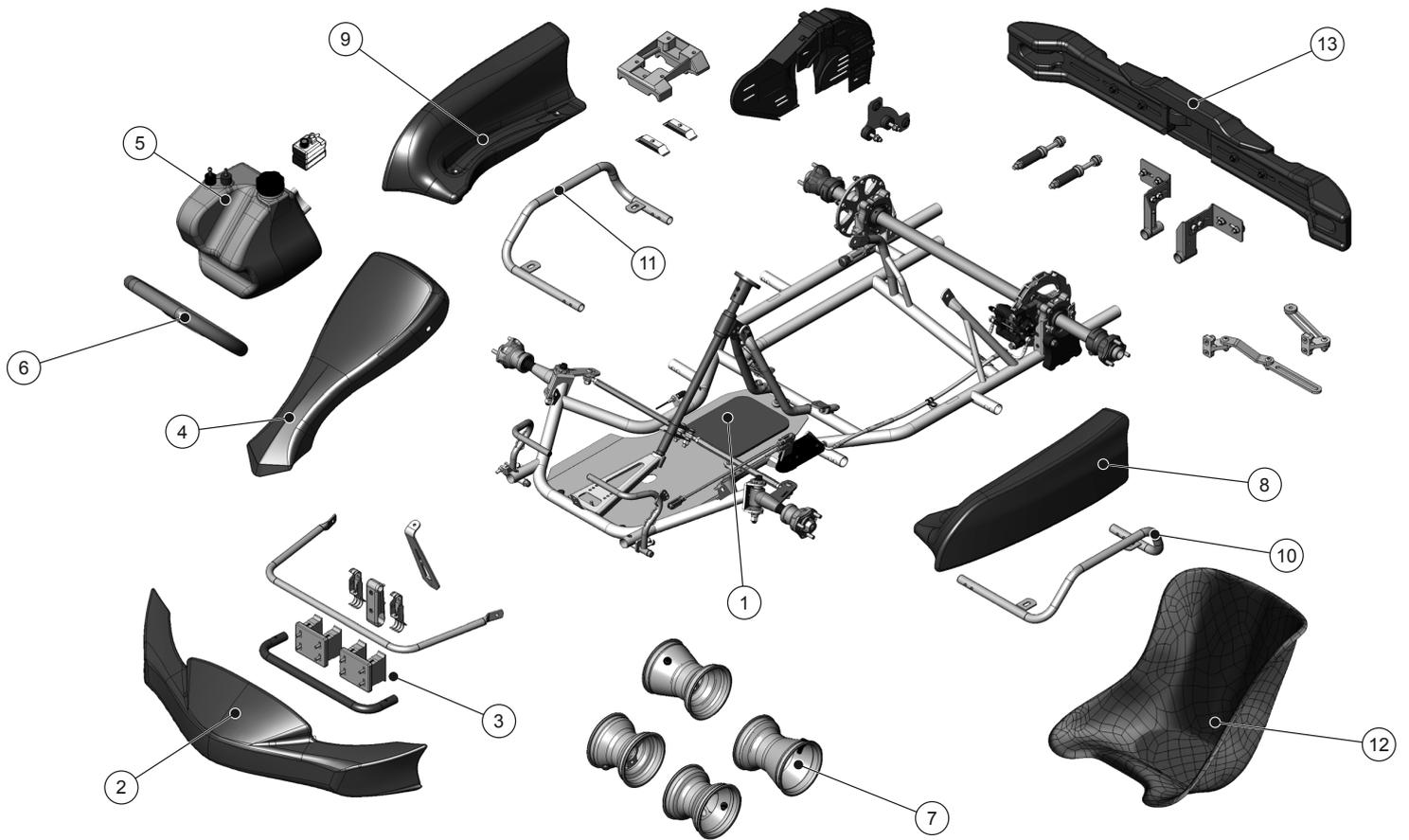
1	AC701.121	“Safety instructions GB” sticker
2	AC701.122	“Safety instructions FR” sticker
3	AC701.124	Sticker “DOT4”

Meaning

<p>SAFETY INSTRUCTIONS Always the seat in good condition according to the maintenance manual Follow the applicable safety rules and specific safety instructions of the track officials.</p> <p>• Do not drink • Without adequate protection • With long hair out of the helmet • With a seat or steering column • Under the influence of drugs or alcohol</p>	Summary of the main safety instructions for the driver.
<p>INSTRUCTIONS DE SECURITE Toujours le seat en bon état de fonctionnement Suivre les règles de sécurité applicables Respecter les recommandations spécifiques de la piste et les instructions de sécurité de la piste.</p> <p>• Ne pas boire • Sans les protections adéquates • Avec une chevelure qui dépasse du casque • Avec une charge de l'axe directionnel ou du volant • Sous l'influence de drogues ou d'alcool</p>	Summary of the main safety instructions for the driver.
<p>LIQUIDE DE FREIN DOT 4 UNIQUEMENT BRAKE FLUID DOT 4 ONLY</p>	Use brake fluid DOT4 only.

2 - Reception

2.1 - Main components



Legend

- 1 Frame pre-equipped
- 2 Spoiler
- 3 Spoiler brackets
- 4 Nassau panel
- 5 Fuel tank
- 6 Steering wheel
- 7 Rims
- 8 Left side pod
- 9 Right side pod
- 10 Left side pod bracket
- 11 Right side pod bracket
- 12 Seat
- 13 Rear bumper



- At reception of your frame check the presence of all elements above.
- For part numbers, refer to the exploded view.

2.2 - Tooling for assembly and adjustment



	Designation	Ø	Part No
1	Ring centering device(Hub) (*)	-	OU931.010
2	Stub axle screw centering device (*)	-	OU931.006
3	Wrench	6	
4	T-shaped Allen key	3	OU911.001
4	T-shaped Allen key	4	OU911.002
4	T-shaped Allen key	5	OU911.003
4	T-shaped Allen key	6	OU911.004
4	T-shaped Allen key	8	OU911.005
5	T-shaped socket wrench	8	OU912.004
5	T-shaped socket wrench	10	OU912.001
5	T-shaped socket wrench	11	OU912.002
5	T-shaped socket wrench	13	OU912.003
6	Torque wrench	-	OU914.012
7	Brake bleeding system	-	OU951.002
8	Socket set 1/2' 22 pcs	-	OU914.017
9	Socket set 1/4' 46 pcs	-	OU914.016
10	Tyre iron	-	OU942.002
11	Manometer	-	OU943.002



(*) Supplied with the chassis..

2.3 - Maintenance products



	Designation	Part No
1	MEKAONE cleaner degreaser	LU839.001
2	MEKAONE multilube	LU839.002
3	MEKAONE brake cleaner	LU839.003
4	MEKAONE chain grease	LU821.001
5	"TYP200" DOT4 brake fluid	LU842.010
6	243 Frenetanch Loctite	LU861.001
7	PFG110 grease tube	LU823.004
8	Tyre grease	LU823.003



For other tools, accessories and equipment, visit ITAKA web site..

3 - Assembly

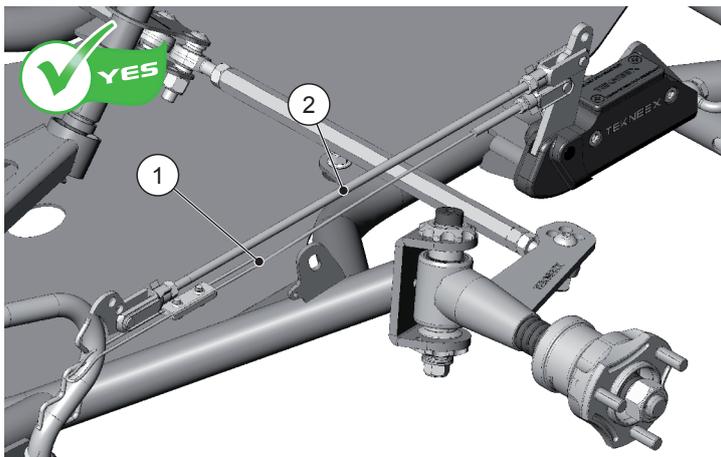
3.1 - Precautions and recommendations

- Tightening torque $\varnothing 6 = 10$ to 12 mN.
- Tightening torque $\varnothing 8 = 12$ to 23 mN.
- Tightening torque $\varnothing 10 = 23$ to 47 mN.
- Tightening torques for rims on hub : 25 mN.
- Screws without bolts: 1 drop of special glue (LU861.001).
- Lubricate rotating parts, ball joints, gas cable ...



- Do not overtighten screws and bolts.

3.2 - Positioning of the safety brake cable

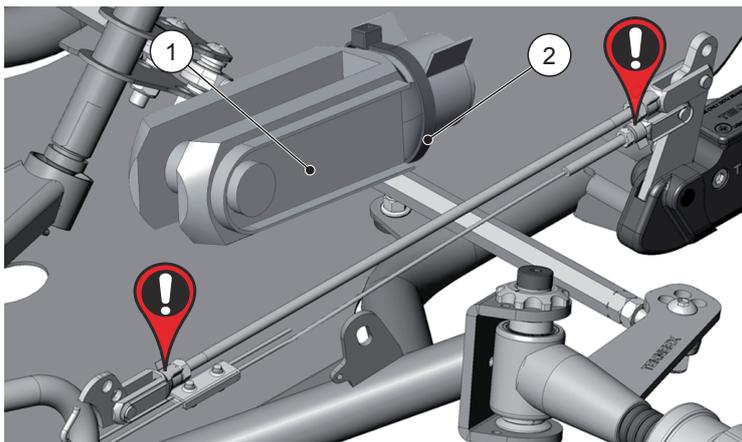


Legend

- 1 Safety cable
- 2 Brake rod



- ▶ Always fit the safety cable clips (1) under the staples of the brake rod (2).



Legend

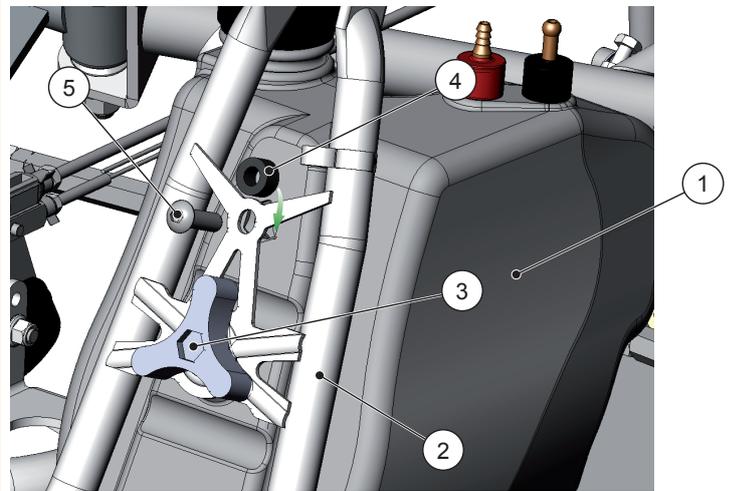
- 1 Spring clip
- 2 Plastic collar "Rilsan"



- ▶ Securing clips (1) of the brake control with a plastic tie "Rilsan" (2).

3.3 - Assembly of the fuel tank and of the overflow bottle

Step 1

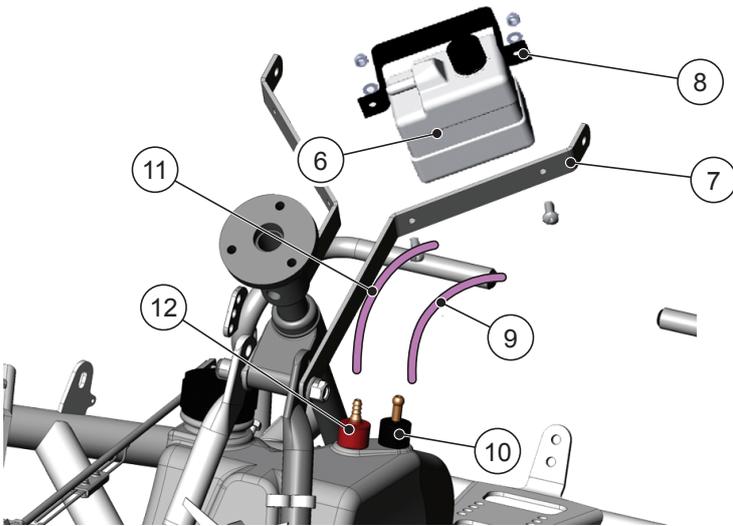


Legend

- 1 Fuel tank
- 2 Steering column support
- 3 Fly nut
- 4 Spacer
- 5 Screw

- Insert the fuel tank (1) between the steering column support (2).
- Tighten the fuel tank (1) with the fly nut (3).
- Put the spacer (4) between the fuel tank (1) and the Steering column support (2), tighten the screw (5).

Step 2



Legend

- 6 Overflow bottle
- 7 Nassau panel support
- 8 Overflow bottle support
- 9 Overflow bottle hose
- 10 Return
- 11 Petrol tank hose
- 12 Red plug

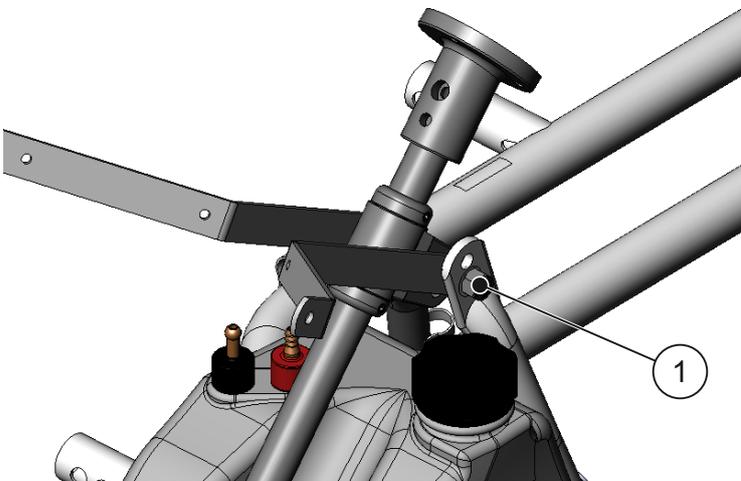
- Put the overflow bottle (6) on the nassau panel support (7) with the overflow bottle support (8).
- Connect the overflow bottle hose (9) to the return (10).
- Connect the petrol tank hose (11) to the red plug (12).



- Check the presence of the diver under the red plug.

3.4 - Assembly of the steering column and steering wheel

Step 1



Legend

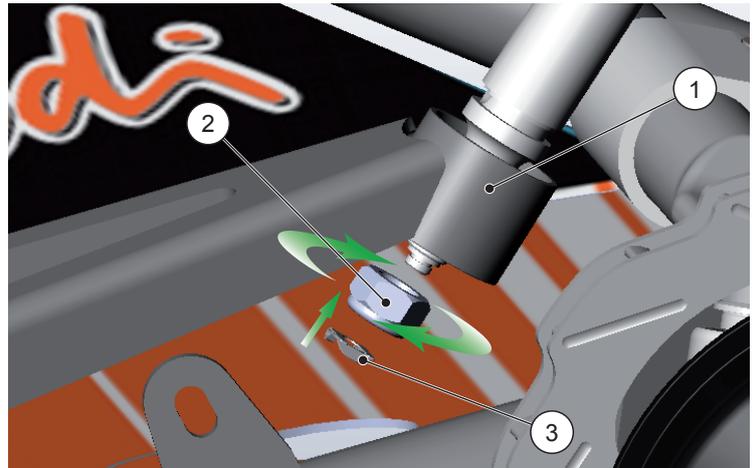
- 1 Screw + nut

- Tighten the nut (1).
- Tighten the assembly.



- See chapter "standard settings" for the assemblies' dimensions which correspond to the standard setting recommended for your frame.

Step 2

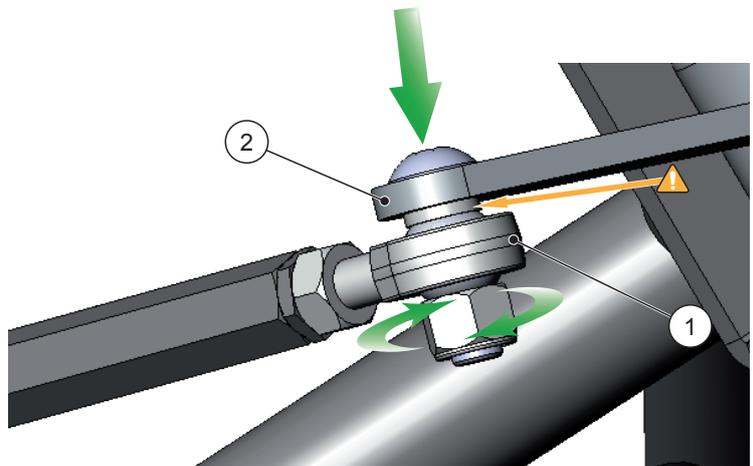


Legend

- 1 Ball joint
- 2 Nut
- 3 Fastener clip

- Insert the threaded end of the steering column in the ball joint (1).
- Tighten the nut (2).
- Tighten the assembly.
- Put the fastener clip (3).

Step 3



Legend

- 1 Ball joint
- 2 Stub axle arm

- Cut the tie-wrap maintaining the stub axles.
- Place the ball joints (1) under the stub axle arm (2).
- Insert the screw into the stub axle arm.
- Place the washer between the ball joint (1) and the stub axle arm (2).
- Tighten the nut.
- Tighten the assembly.

Step 4



- Legend**
- 1 Support
 - 2 Screw
 - 3 Top of the wheel
 - 4 Steering column

- Tighten the steering wheel (straight side up (3)) with the 3 screws (2) on the steering wheel support (1).
- Tighten the steering wheel support (1) on the steering column (4).



- Once the steering system is assembled, please check that the steering wheel is free to make a quarter of a turn right and left.

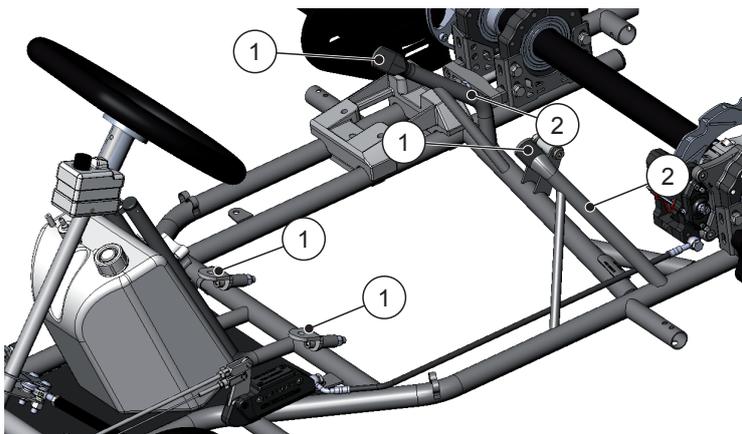


- ▶ A bad assembly or a bad adjustment of the steering system can lead to accidents. Systematically check the tightening of the system and its adjustment.

3.5 - Assembly of the seat



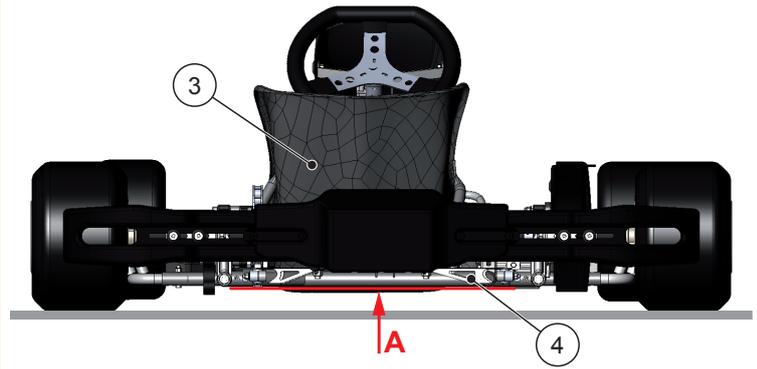
- See chapter "standard settings" for the assemblies' dimensions which correspond to the standard setting recommended for your frame.



- Legend**
- 1 Fixing points
 - 2 Seat supports

- Get the seat supports (2) closer, or wider, depending on the seat size.
- Use the shims of the seat fixing kit to get a good fit.

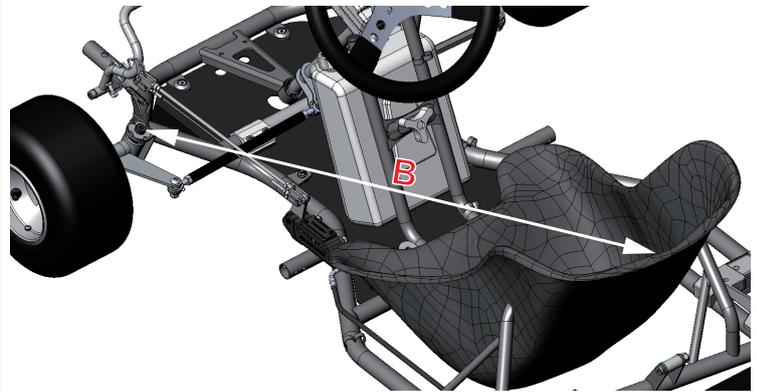
Ground clearance



- Legend**
- 1 Seat
 - 2 Frame tubes

- Adjust the bottom of the seat (1) with the lower face of the frame tubes (2).

Seat Position



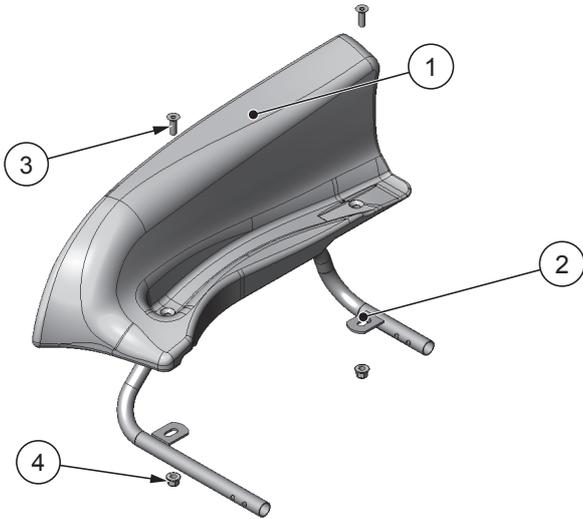
- Position the seat following dimension B.
- Drill a 8.5 mm diameter hole in the seat.
- Tighten up screws and washers on assembly points (1).

3.6 - Assembly of the bodywork



- For screws and nuts references, refer to the spare parts.

Step 1

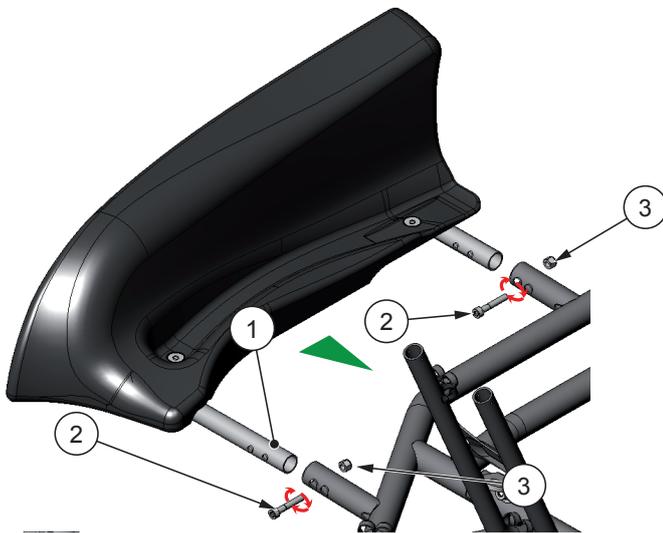


Legend

- 1 Side pod
- 2 Side pod support
- 3 Screw
- 4 Nut

- Place the side pod (1) on the side pod support (2).
- Tighten the side pod (1) with the screws (3) and nuts (4).

Step 2

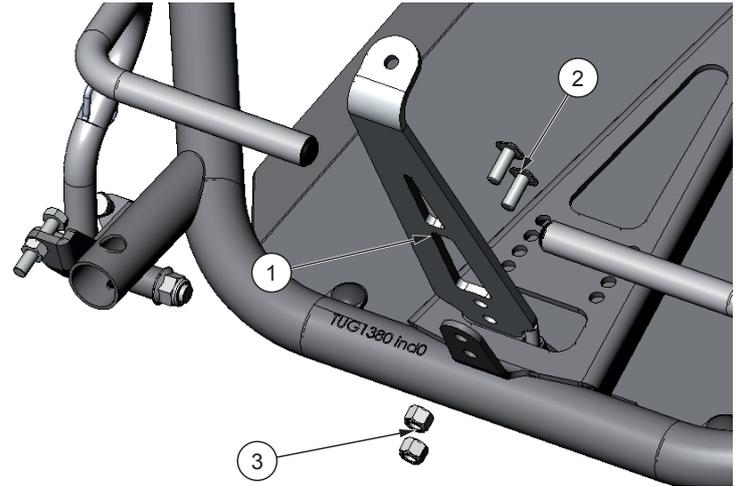


Legend

- 1 Side pod support
- 2 Screw
- 3 Nut

- Place the side pod support (1) on the frame.
- Tighten with the screws (2) and the nuts (3).

Step 3

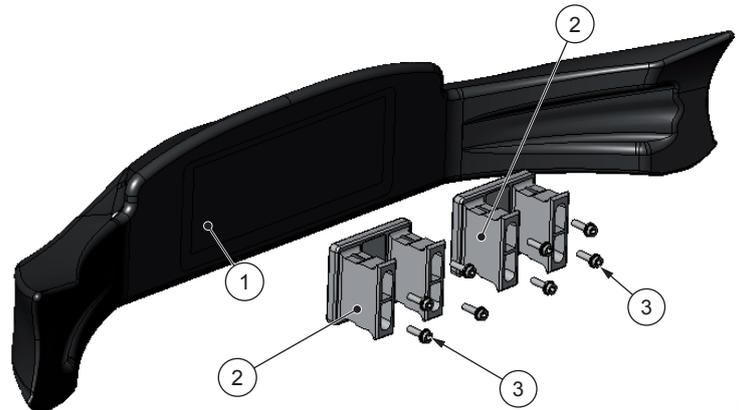


Legend

- 1 Lower support for Nassau panel
- 2 Screw
- 3 Nut

- Tighten the lower support on the frame with the screws (2) and the nuts (3).

Step 4

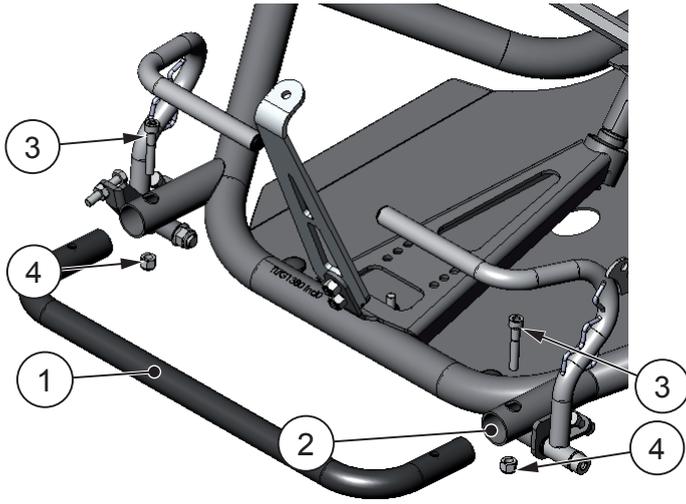


Legend

- 1 Spoiler
- 2 Fixing plate
- 3 Screw

- Assemble the fixing plates (2) on the spoiler (1) using screws (3).

Step 5

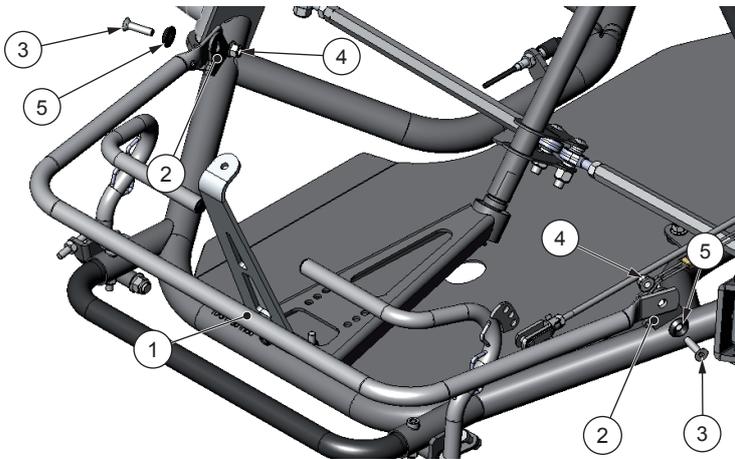


Legend

- 1 Spoiler lower support
- 2 Front cross member
- 3 Screw
- 4 Nut

- Insert the spoiler lower support (1) into the front cross member of the frame (2).
- Tighten with the screws (3) and the nuts (4).

Step 6

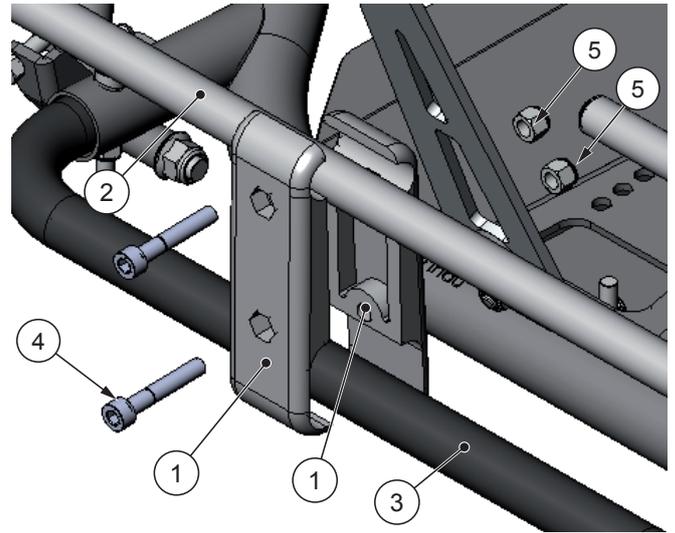


Legend

- 1 Spoiler upper support
- 2 Lug
- 3 Screw
- 4 Nut

- Place the spoiler upper support (1) on the outer face of the lug (2).
- Tighten with the screws (3) and the nuts (4).

Step 7

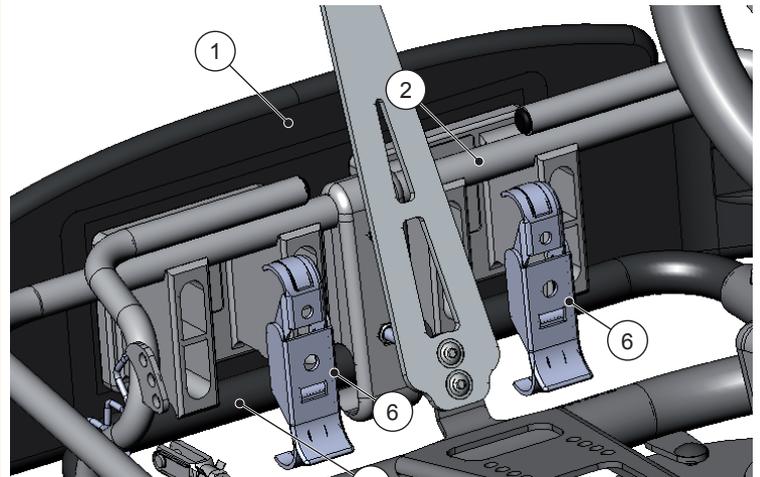


Legend

- 1 Mounting flange spoiler
- 2 Upper support
- 3 Lower support
- 4 Screw
- 5 Nut

- Assemble the mounting flange spoiler (1) between the spoiler upper support (2) and the spoiler lower support (3) with two screws and two nuts.

Step 8

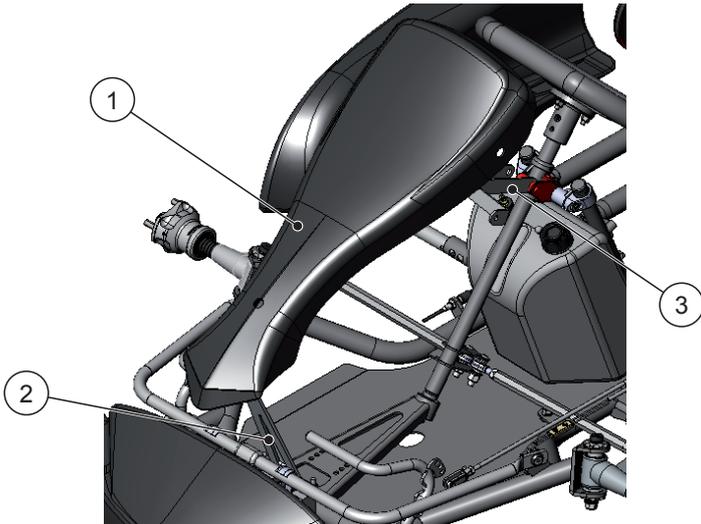


Legend

- 2 Upper support
- 3 Lower support
- 6 Clamp

- Place the spoiler (1) between the spoiler supports (2) and (3).
- Tighten the spoiler (1) and the spoiler supports (2) & (3) with the 2 clamps (6).

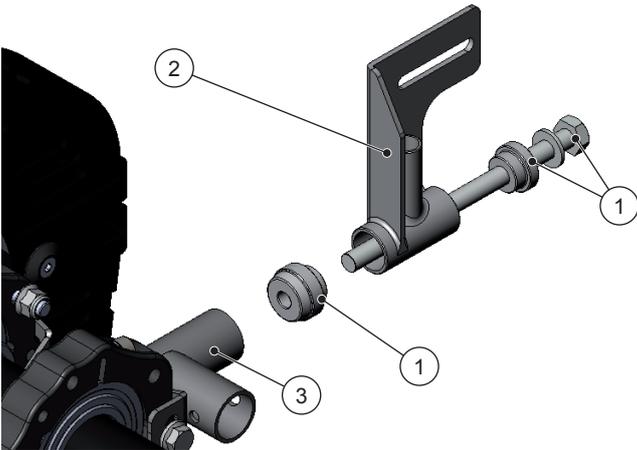
Step 9



- Legend**
- 1 Nassau panel
 - 2 Lower support
 - 3 Upper support

- Tighten the nassau panel (1) on its supports (2) and (3) with screws, nuts, and washers.

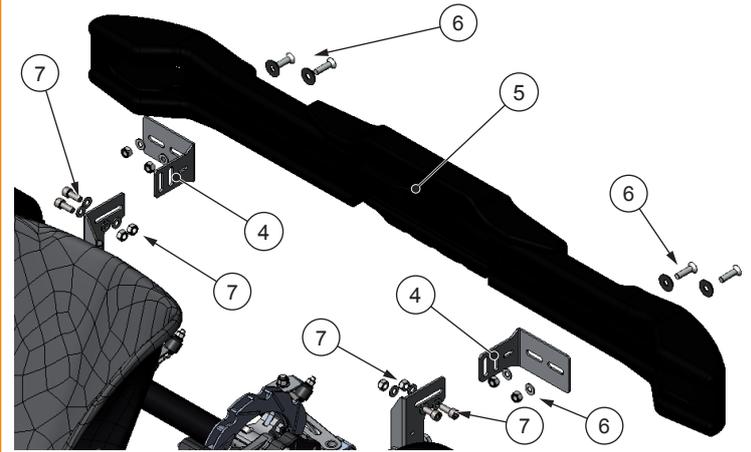
3.7 - Mounting the rear protections



- Legend**
- 1 Mounting kit
 - 2 Bumper support
 - 3 Tube chassis

- Assemble the mounting kit (1) with the element of the bumper support (2).
- Mount the assembly in the tube chassis (3), tighten with the screw of the fixing kit (1).
- Apply the same procedure for the other side.

Step 2



- Legend**
- 4 Bumper support
 - 5 Bumper
 - 6 Screw + nut
 - 7 Screw + nut

- Assemble bumper support (4) on the bumper (5) using screws and nuts (6).
- Assemble the bumper (5) on the chassis with screws and nuts (7).

4 - Commissioning

4.1 - Safety instructions to the pilots



- ▶ Your kart can only be driven on a track approved by CIK/FIA, or your local federation and by a driver who is in possession of a valid membership card of the kart's federation of his own country.

4.2 - Pilot protection

Before going on the track, the pilot must wear the following protections:

- Integral helmet: CIK/FIA approved, fitting the pilot head size, with tightened strap and closed visor. Refer to CIK/FIA regulations (Compulsory).
- Suit: CIK / FIA level 1 or level 2 approved (Compulsory).
- Gloves (Compulsory).
- Neck protection : CIK/FIA approved (Compulsory).
- Rib protection: fitting pilot's size and seat (Recommended).
- Rain suit: with water tight fasteners (Recommended when necessary).



- Choose those equipments within the CIK / FIA approved ones of the ITAKA web site.

Driving is forbidden to any pilot:

- Wearing a scarf because of risk with rotating parts.
- With long hair coming out of the helmet.
- With wide floating clothes.
- With health problems.
- Under the influence of drugs and (or) alcohol.



- ▶ For your safety and the safety of other pilots, strictly follow the above instructions: not doing so may lead to severe, even fatal injuries.

5 - Adjustments

5.1 - Standard adjustments

	<i>Dry track</i>	<i>Wet track</i>
<p>Stub axle height</p>	<p>A = 8 mm B = 6 mm</p>	<p>A = 10 mm B = 4 mm</p>
<p>Front tracking width</p>	<p>A = 5 rings inside (25 mm) B = 60 mm</p>	<p>A = 8 rings inside (40 mm) B = 60 mm</p>
<p>Rear tracking width</p>	<p>A = 1110 mm à 1120 mm</p>	<p>A = 1100 mm à 1110 mm</p>
<p>Rear axle position</p>	<p>B : Medium</p>	<p>B : Medium</p>
<p>Position of eccentrics</p>	<p>A : eccentrics 1° B : TOP Mark forward C : BOTTOM Mark inside</p>	<p>A : eccentrics 3° and 4° B : TOP 4° Mark forward C : BOTTOM 3° Mark Backward</p>

	Dry track	Wet track
<p>Position of steering tie rods ends</p>	A 2	A 2
<p>Position of seat</p>	<p>A = Lower face of the tubes + 2 sprocket (8 mm) B = 855 mm ± 10 mm</p>	<p>A = Lower face of the tubes + 2 sprocket (8 mm) B = 855 mm ± 10 mm</p>



- These adjustments are given for information. It is advisable to refine these adjustments according to track conditions (weather - grip), driving, engine and tires.

5.2 - Adjustment of front wheels

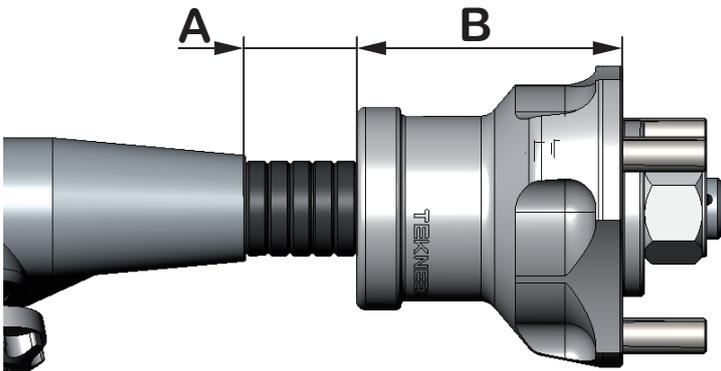
5.2.1 - Adjustment of front tracking width

The adjustment of the front width is realized with several spacers (spacer of 10 mm, and spacer of 5 mm for each stub axle), and 3 hubs type (short hub: 50 mm, standard hub: 60 mm or long hub: 75 mm).



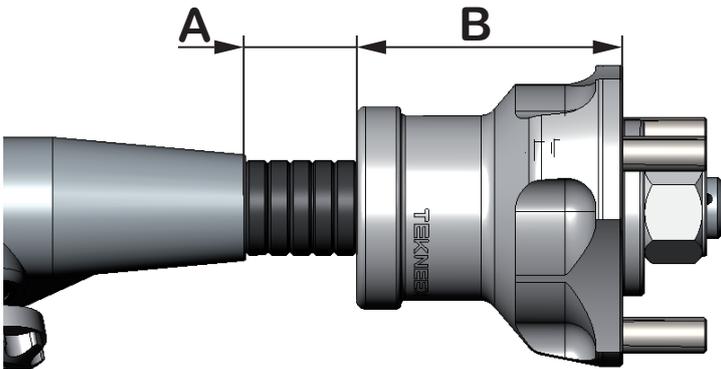
- The wider the front is widened, the harder the steering is hard.
- The narrower the front is narrows, the easier the steering is easy.
- If you wish increase the grip of front, it suffice to increase the width of the front with spacers.

Dry track



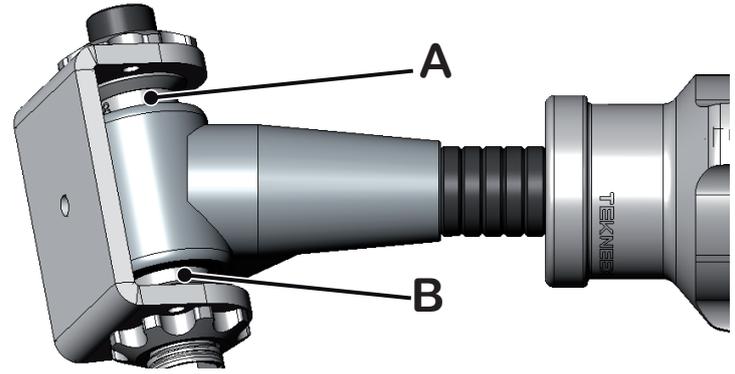
It is advisable to adjust the front with a spacer of 25 mm (A) (2 spacers of 10 mm and 1 spacer of 5 mm inside), and use the standard hub: 60 mm (B).

Wet track



It is advisable to adjust the front with a spacer of 40 mm (A) (3 spacers of 10 mm and 2 spacers of 5 mm inside), and use the standard hub: 60 mm (B).

5.2.2 - Adjustment of front wheel height



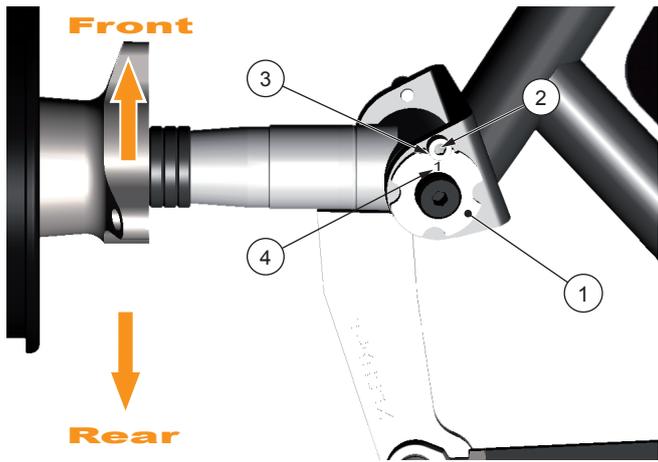
- Place one 8 mm spacer on top (A) and one 6 mm spacer at the bottom (B).

Adjustment (A + B = 14mm)

	A	B
	4	10
	6	8
	7	7
Standard adjustment	8	6
	10	4

5.2.3 - Adjustment of the caster

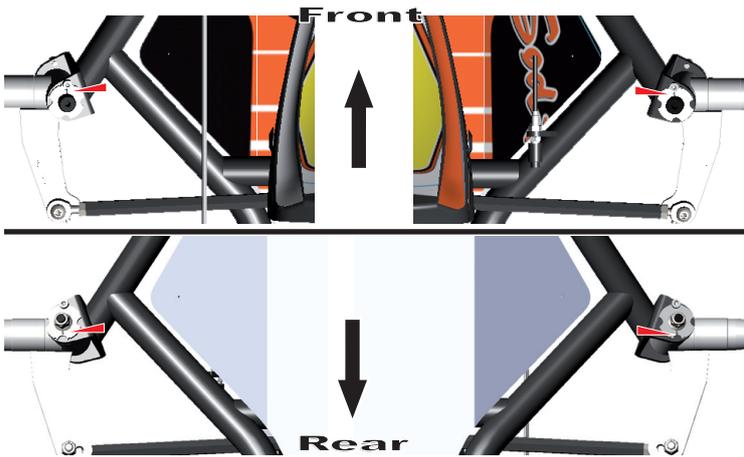
Description of the eccentric.



Legend

- 1 Eccentric
 - 2 Screw on the fork
 - 3 Marked slot
 - 4 Mark
- (1=0.5°, 2 eccentric marked "1" gives 1°)

Adjustment of the caster - High



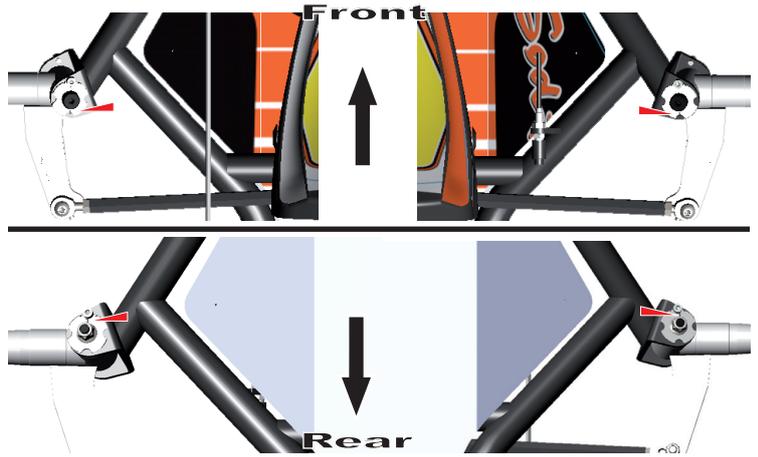
Eccentrics on top:

- The mark is positioned in front of the screw. (Towards the front of the chassis).

Eccentrics on bottom:

- The mark is positioned on the opposite side of the screw. (Towards the rear of the chassis).

Adjustment of the caster - Low



Eccentrics on top:

- The mark is positioned on the opposite side of the screw. (Towards the rear of the chassis).

Eccentrics on bottom:

- The mark is positioned in front of the screw. (Towards the front of the chassis).

Standard adjustment

- 1° upper eccentrics place in high caster position .

Increase the caster

- 2° eccentric in high caster position.



- In extreme conditions, use 3°, 4° or more eccentrics.

Reduce the caster

- 2° or 3° eccentric in low caster position.



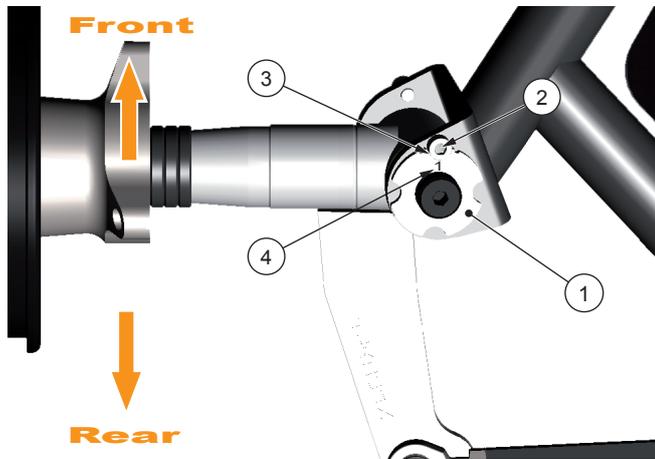
- In extreme conditions use eccentrics higher degrees..

5.2.4 - Adjustment of the camber



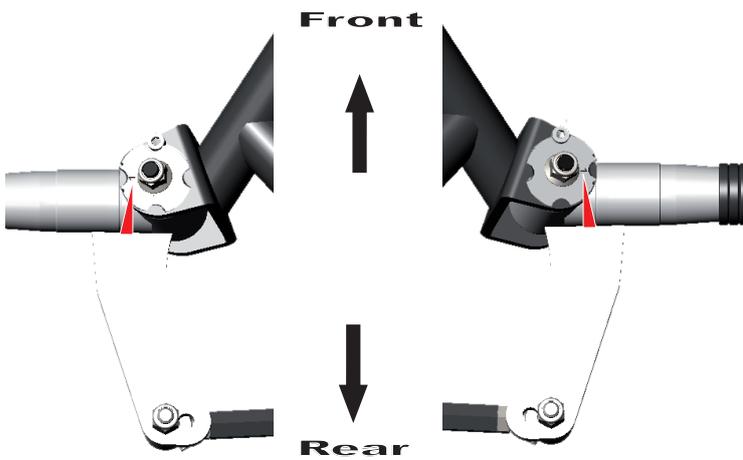
- Use the eccentrics at the bottom.

Description of the eccentric.



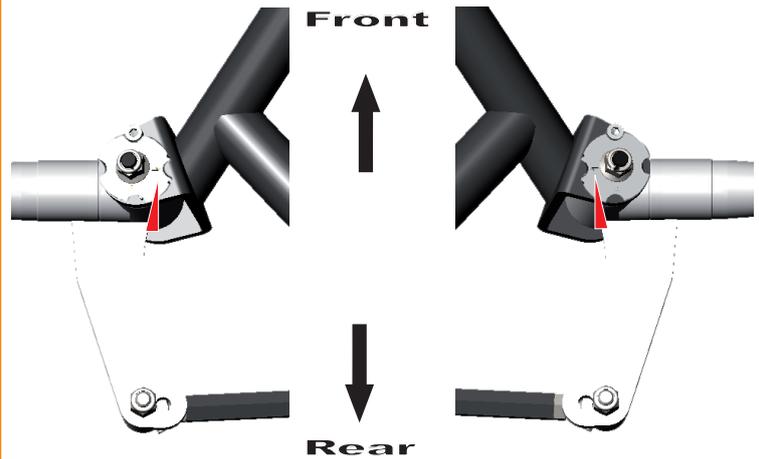
- Legend
- 1 Eccentric
 - 2 Screw on the fork
 - 3 Marked slot
 - 4 Mark
- (1=0.5°, 2 eccentric marked "1" gives 1°)

Camber - More positive



- Eccentrics at the bottom:
- The mark is positioned towards the outside of the chassis.

Camber - More negative



- Eccentrics at the bottom:
- The mark is positioned towards the inside of the chassis.

Standard adjustment

- 1° Lower eccentrics place in negative camber position .

Increase the camber

- Same position as the "More negative" adjustment by replacing the lower 1° eccentric by the 2° eccentric.

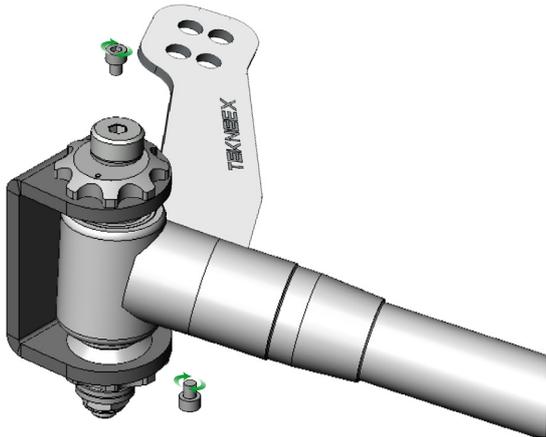
Reduce the camber

- Same position as the "More positive" adjustment. See "Camber - More positive".

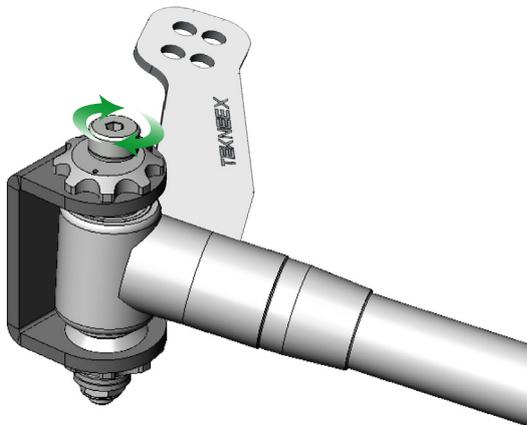


- For high degrees eccentrics to be used in extreme conditions, refer to the ITAKA web site
- Some negative camber generally improves the performances of the kart.

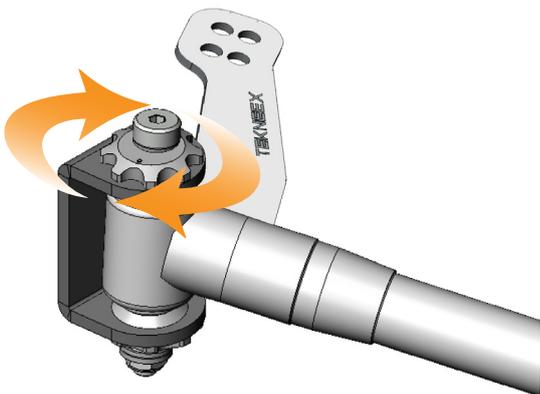
5.2.5 - Quick adjustment of caster/camber pill



- Remove the 2 screws.



- Unlock axle of the front stub.



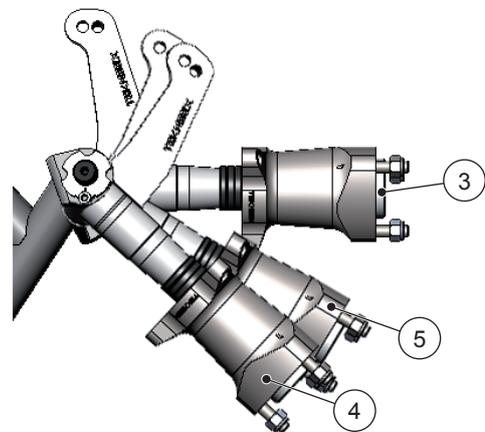
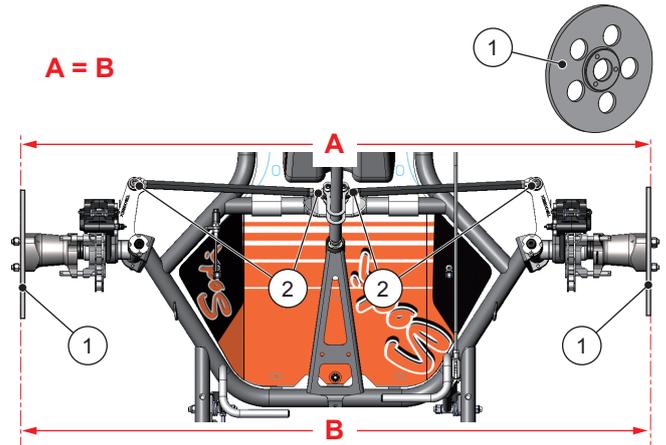
- Rotate the 2 caster/camber pills to adjust the caster or camber angle.

Adjustment

Caster angle : Top caster/camber pill

Camber angle : Low caster/camber pill

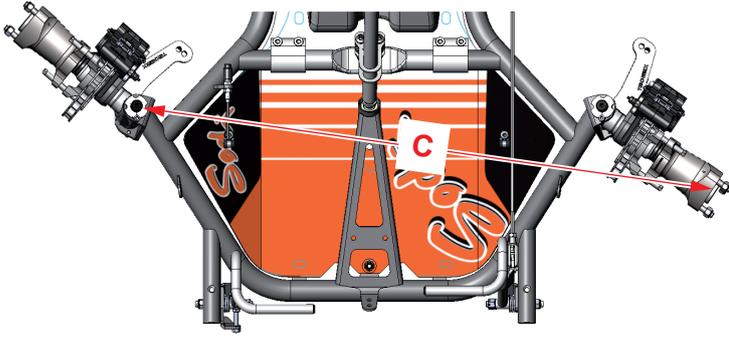
5.2.6 - Front wheel alignment



Legend

- 1 Wheel alignment disk
- 2 Tie rod nut and lock nut
- 3 Steering wheel in straight position
- 4 Maximum steering angle position
- 5 Steering wheel fully turned position

- Place the kart on a trolley.
- Place the front wheel alignment disk (1) (available on ITAKA web site).
- Unscrew the lock nuts (2) of the 2 tie rods.
Warning: lock nut of tie rod side is a right hand thread; lock nut of steering column side is left-hand thread.
- Position the upper branch of the steering wheel in the kart axle.
- Measure A and B with a roll meter. Adjust the tie rods until you get A=B with a tie rod length on the right side 1.5mm bigger than the tie rod length on the left side.



- Turn the steering wheel to put stub axle in position (4), measure the dimension C.
- Turn the wheels in the opposite direction and measure the dimension C for the second wheel.
- The two dimensions C must be equal.

Recommended setting on a dry track

- 2 mm opening : $B = A + 2\text{mm}$.



- **Make sure the dimensions C are equal on each side.**

Recommended setting on a wet track

- 7 mm opening : $B = A + 7\text{mm}$.



- **Make sure the dimensions C are equal on each side.**

- Remove the front wheel alignment disk (1).

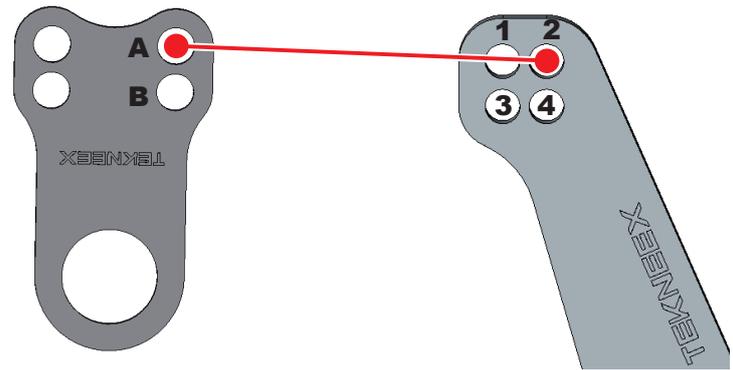


- **Do not forget to tighten the 2 lock nuts on the tie rods; otherwise the parallelism will be lost in a few minutes.**
- **Any time you work on the front wheels, check the parallelism. Do the same after shocks**



- ▶ **Never drive with badly tightened wheels: it may lead to severe, even fatal injuries.**
- ▶ **Make sure that each ball joint penetrates at least 5 threads in the tie rods.**

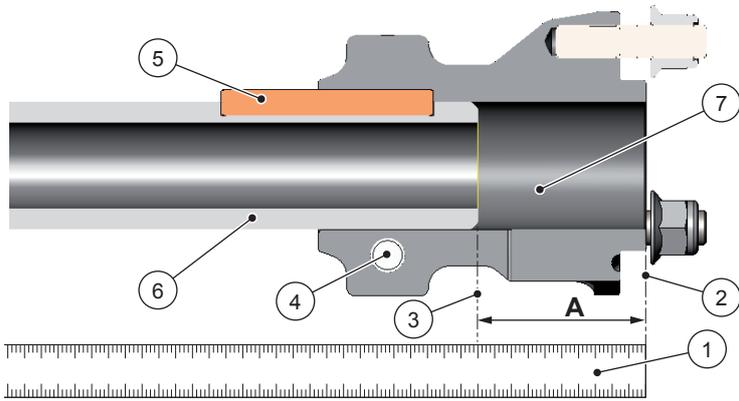
5.2.7 - Adjustment of tie rods



- Standard adjustment : A 2.

5.3 - Adjustment of rear wheels

5.3.1 - Adjustment of hubs



Legend

- 1 Ruler
- 2 Hub base
- 3 Top of the axle
- 4 CHC screw
- 5 Cotter pin
- 6 Axle
- 7 Hub

- Place the kart on a trolley.
- Unscrew the 3 nylstop nuts from the rear wheels with the proper size wrench, and then remove wheels.
- Using a rule (1) or any depth gauge, measure between the hub base (2) and the top of the axle (3).
- Undo the CHC screws (4) of the rear hub with an appropriate wrench until the hub can slide along the axle shaft (6) and cotter pin (5).
- Move the hub (7) to the desired position with the rule (1) in place against the hub base (2).
- Retighten and block the CHC (4) screws.
- Repeat the operation on the other hub.
- Replace both wheels following the rotation direction indicated on tyre wall.
- Replace locknuts (nylstop) and tighten securely.

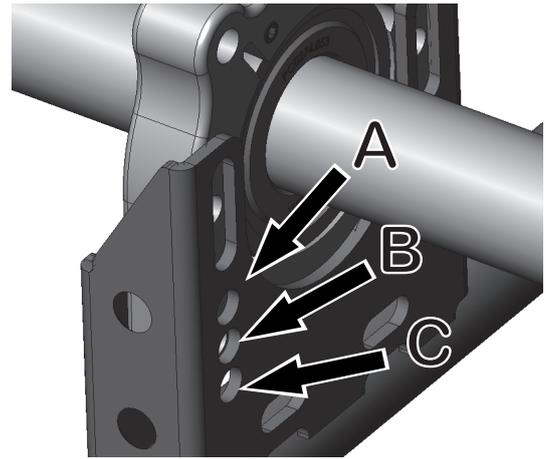


- A rear tracking width is measured from the outside of the rims (left and right).
- A wider rear tracking width tends to increase sliding. Too narrow a rear tracking width may lead to a bumpy chassis.



- ▶ Badly tightened wheels may lead to severe, even fatal injuries.
- ▶ Check the hub key (5) is correctly positioned.
- ▶ Never position the hubs beyond the maximum allowed width: it may lead to severe or even fatal injuries.

5.3.2 - Position of rear axle



On most tracks, the correct axle position is middle position. This corresponds to a low position of the chassis relative to the ground.



- A large ground clearance means more grip.
- A low ground clearance means more sliding.

5.3.3 - Type of axle

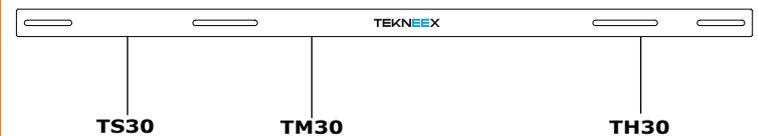
The stiffness of the axle plays an important part in the behaviour of the kart.



- Visit *ITAKA* web site for different axle types.

- A flexible axle suits high grip conditions (Heat and (or) gum on the track).
- A stiff axle suits low grip conditions (rain, humid track, cold with little gum track).

In order to get the best out of your kart, do not hesitate to test different stiffness of axle :



5.4 - Adjustment of seat

The position of the centre of gravity has also a key influence on the behaviour of the kart.

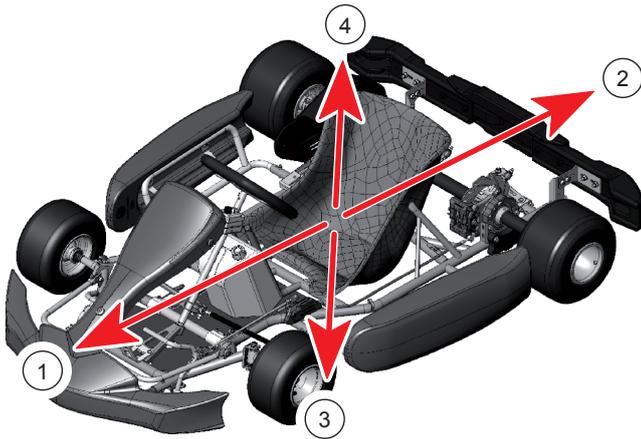
One can monitor this centre of gravity by changing the position of the seat.

This position affects the masses distribution between front and rear axle.

It directly affects the understeering or oversteered chassis behaviour.

Depending on your weight, your height, your riding style, the ideal position may change a little.

Compared to the standard position (Cf. chap. 3.5), moving the seat has the following effects:



1) *Seat moved forward*

- Gives more grip on the front wheels (more sliding of the rear wheels).
- Allow to correct the front wheel axle unit imprecise, but delays the time it is possible to accelerate into the turn, (Rear more slippery).

2) *Seat moved backwards*

- Less grip on the front wheels.
- More grip on the rear wheels.

3) *Seat lower*

- Less grip (front and rear wheels).
- To try on very high grip conditions.

4) *Seat higher*

- Increases the grip.
- To be tried in wet conditions.



- **Always use a seat tightener. One on the left hand side and one on the right hand side give an optimal performance on almost all types of tracks.**

6 - Maintenance

6.1 - Brakes - Usual maintenance

6.1.1 - Fluids and lubricants

Do not use any oil-based lubricant, which would cause swelling of the rubber parts.

SODIKART recommends the use of DOT 4 brake fluid (refer to the ITAKA web site for product references) and recommends that the disc and pads should be cleaned using brake cleaner only (refer to the ITAKA web site for product references).

Use PFG110 grease to install the seals (visit the ITAKA site for product catalogue numbers).

Brake fluid.....“TYP200”Ref : LU842.010



- ▶ The “TYP200” brake fluid has been designed for racing use and is used exclusively for this purpose (forbidden on open road).

Brake cleanerMEKAONE Ref : LU839.003

Grease.....Graisse PFG110..... Ref : LU823.004



- ▶ Use brake fluid DOT4 only. Using another brake fluid could cause leaks and failure of the brake system.



- The brake system is not compatible with DOT 5.



- Place the fluids in watertight cans and recycle them according to the regulations in force.

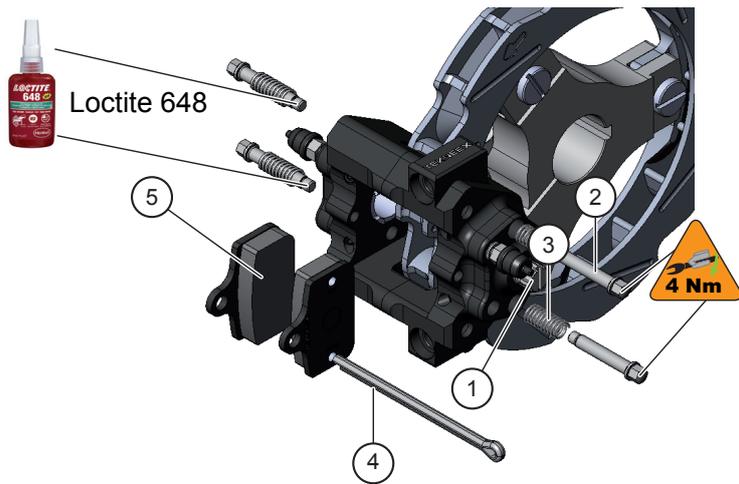


- Never spray brake cleaner on the master cylinder and brake caliper seals.

6.1.2 - Frequency of cleaning and maintenance

	Before any session	After 1 meeting or 100 km	After 3 meeting or 300 km	After 5 meeting or 500 km	As soon as required
Checking the brake fluid level	X				
Replacing the brake fluid				X	
Checking the brake pads for wear	X				
Replacing the brake pads					X
Checking for leaks in the hose	X				
Checking the condition of the brake hose		X			
Checking the tightness of the brake hose screew	X				
Checking the tightness of the kart brake system			X		
Checking the condition of the brake disc	X				
Checking the brake disc for wear		X			
Replacing the brake disc					X

6.1.3 - Replacing brake pads on the D24 2-piston calipers



- Legend**
- 1 Adjustment screw
 - 2 Return screw
 - 3 Spring
 - 4 Pin
 - 5 Brake pad

- Adjust the brake pads until they reach the stop using the adjustment screws (1).
- Remove the four return screws (2) and the four springs (3).
- Straighten the ends of the pin (4) and then remove it.
- Remove the used brake pads (5).
- Place the new pads (5) in position.
- Place the new pin (4) in position, and then twist its ends.
- Reinstall the four return screws (2) and the new springs (3). Tightening torque 4 mN. Applying a drop of high thread locking compound on the threads of the screw.
- Tighten the screws (1) to put the pads in position. The gap between the pad and the disc must be 1 mm.

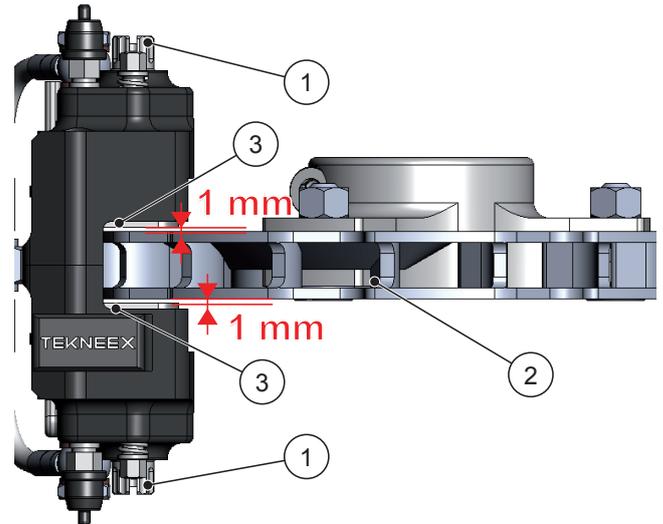


- Do not operate the brake pedal unless pads are installed. This would make the pistons difficult to return to their position, and brake fluid leaks might then occur.



- ▶ Check the pads for wear before every start-up.
- ▶ Never drive with excessively worn pads (minimum thickness of pads for D24 2-piston calipers : 6 mm).
- ▶ The brake is an essential safety element. If the braking system is defective or you have the slightest doubt, do not put the kart in service.

6.1.4 - Adjusting the gap between the pads and the disc



- Legend**
- 1 Adjustment screw
 - 2 Disc
 - 3 Pad

- Tighten or loosen the screw (1) to obtain a 1 mm gap between the disc (2) and the pad (3).

6.1.5 - Replacing the brake hose

- The brake fluid hoses are a critical safety element. It is very important to check their state regularly.
- Check the state of the hoses especially at connecting points and fixation points.
- Replace any damaged hose.
- Use a spanner to loosen the screw at each end of the hose and the mounting points on the kart.
- Install a new hose with new seals and banjo screws.
- Ensure that the mounts securing the hoses to the kart are properly tightened.

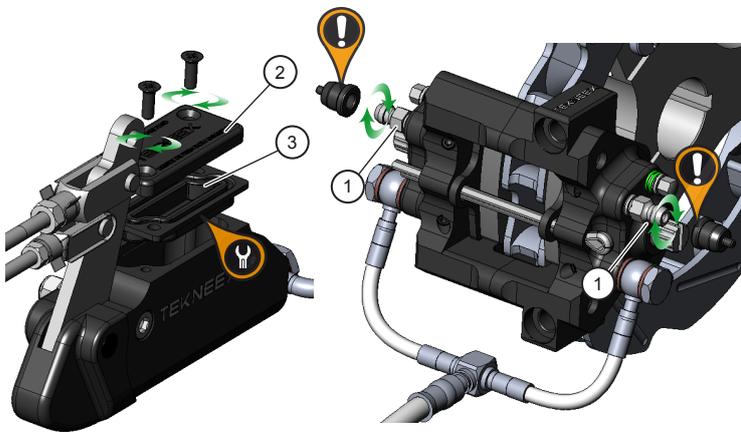


- ▶ The brake is an essential safety element. Do not put the kart in operation if the break system is faulty or if you have a doubt.
- ▶ Faulty braking system may lead to a serious or even fatal injury.
- ▶ Check connexions of hoses, no leak.
- ▶ Use brake fluid DOT 4 only.

6.1.6 - Tightness of the brake hose screw



6.1.7 - Bleeding the rear brake circuit



Legend

- 1 Bleeder screw
- 2 Cap
- 3 Diaphragm

- Use 2 pipes and a container to collect the used fluid.
- Remove the protective cover of the 2 bleeder screws (1) and connect the 2 hoses to the bleed nipple with the free end in the receptacle.
- Gently unscrew the 2 bleeder screws (1) and the filler cap (2)
- Repeatedly press the brake pedal until all the fluid has drained out.
- When all the fluid has been drained, remove the cap (2), the diaphragm (3) and top up to the maximum level with brake fluid. Tighten the 2 bleeder screws (1), and then press the brake pedal three or four times.
- Loosen the 2 bleeder screws (1) of the calliper. Brake fluid should flow out. Retighten the bleed screws, and repeat this step several times to feed the circuit properly. Remember to add brake fluid to the master cylinder as required. Bleed the circuit so that the brake fluid flowing out of the hose contains no air bubbles.
- Retighten the calliper bleed screws (1), remove the pipes and reapply the protective cap.



- Top up the fluid in the master cylinder to its maximum level, and retighten the cap (2) and the diaphragm (3).



- ▶ An air bubble in the brake system can lead to a partial or total lost of brakes and may lead to a serious or even fatal injury.
- ▶ Leaks in the brake system may lead to a serious or even fatal injury.
- ▶ Moisture in the brake fluid may cause vapour lock and a sudden loss of braking power, may lead to a serious or even fatal injury.
- ▶ Use brake fluid DOT 4 only
- ▶ Test the brake after each bleed.



- We recommend that you drain and refill the brake circuit after every brake pad change. This will allow you to maintain optimum braking performance.
- To bleed your brake system more rapidly, especially for a big fleet, we recommend the priming system SODIKART (Ref. OU951.002).
- Store the used brake fluid in labelled containers until it is collected by a specialist waste disposal company.
- The brake liquid doesn't contain petrol, so never pour the liquid into a using oil tank.
- Brake fluid absorbs water Make sure the replacement brake fluid comes from a container that has been stored in good conditions and is recent.
- Check that the pedal is firm after each bleed.

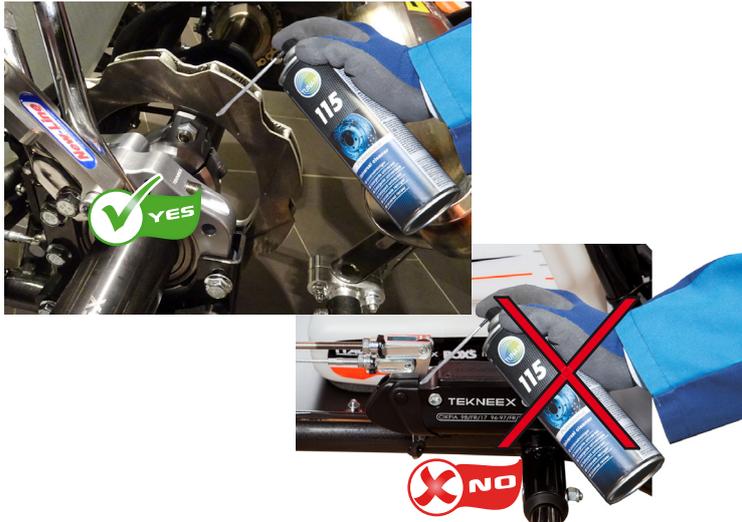
6.1.8 - Cleaning

Brakes should be cleaned using a dry cloth and brake cleaner only.

Do not use WD40 or other greasy products to clean the callipers and brake discs.



- ▶ If WD-40 or a similar cleaning product is splashed on the brake disc or calliper, braking will be less efficient or possibly totally ineffective for a few revolutions. This could cause a serious or fatal accident.
- ▶ Do not apply WD-40 or other cleaning products to the brake pump.



- Never spray brake cleaner on the master cylinder and brake caliper seals.

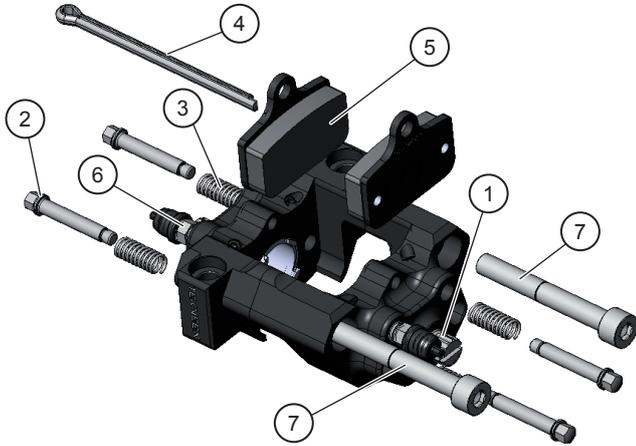
6.2 - Brakes - Workshop maintenance

6.2.1 - Replacing calliper seals / 2 piston caliper pistons D24



This operation must be performed by a Sodikart dealer.

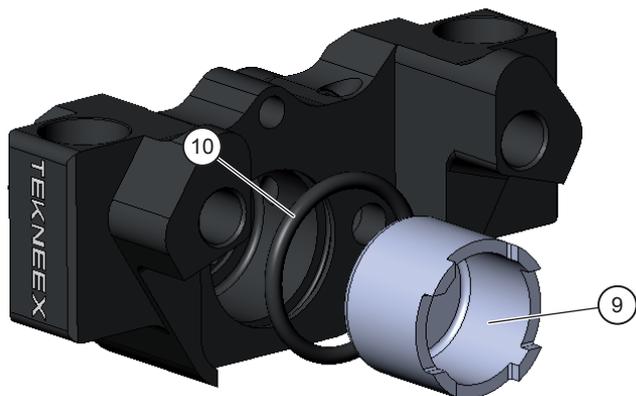
Removing



Legend

- 1 Adjustment screw
- 2 Return screw
- 3 Spring
- 4 Pin
- 5 Brake pad
- 6 Bleeder screw
- 7 Mounting screw

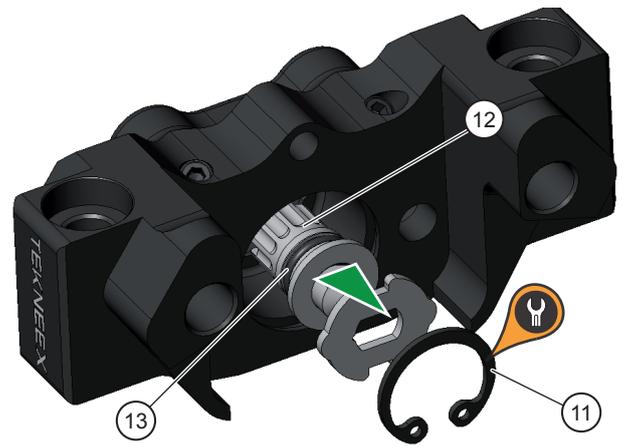
- Adjust the brake pads until they reach the stop using the adjustment screws (1). Remove the four return screws (2) and the four springs (3).
- Untwist the ends of the pin (4) and then remove it.
- Remove the brake pads (5).
- Remove the 2 bleed screws (6) with the cap.
- Disconnect the yoke by removing the two mounting screws (7).



Legend

- 9 Piston
- 10 Gasket

- Remove the piston (9), and the seal (10) from each half-calliper.



Legend

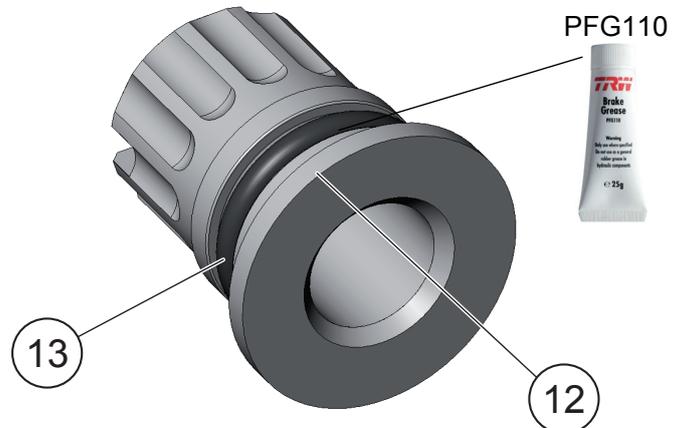
- 11 Snap ring
- 12 Piston stop
- 13 O-ring

- Remove the snap ring (11) using fine pliers.
- Remove the piston stop (12) and remove the O-ring (13).
- Apply the same procedure for the second half-calliper.
- Clean the half calliper bodies. Do not use WD40 or other greasy products to clean the callipers.



Do not use any cleaning product that could damage the seals. A brake fluid leak could appear, causing a serious or fatal accident..

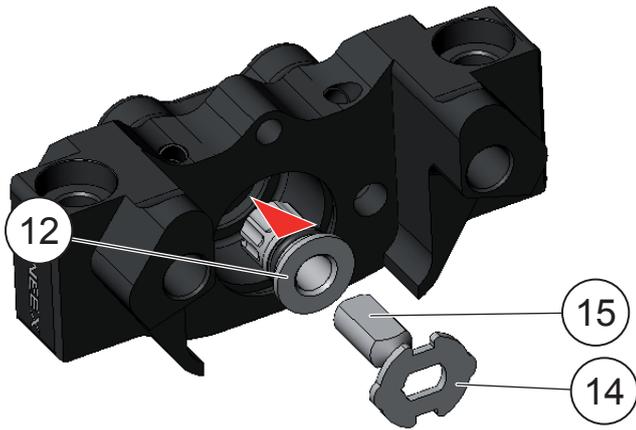
Reassembly



Legend

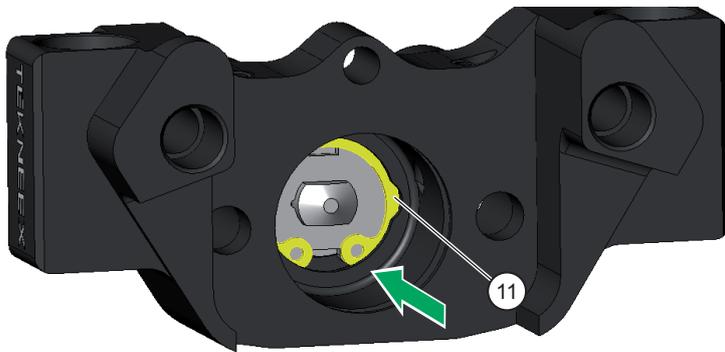
- 12 Piston stop
- 13 O-ring

- Apply PFG110 grease to a new O-ring (13).
- Place the O-ring (13) in the piston stop groove (12).
- Apply PFG110 grease to the O-ring (13) and the piston stop (12).



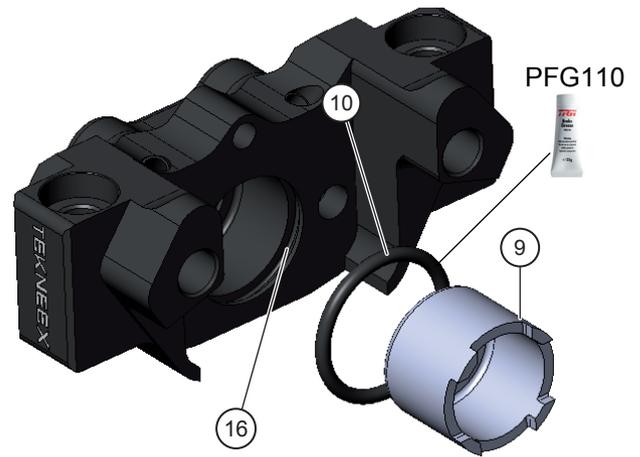
- Legend**
 12 Piston stop
 14 Plate
 15 Screw

- Place the piston stop (12), the plate (14) and the screw (15) in the half calliper.



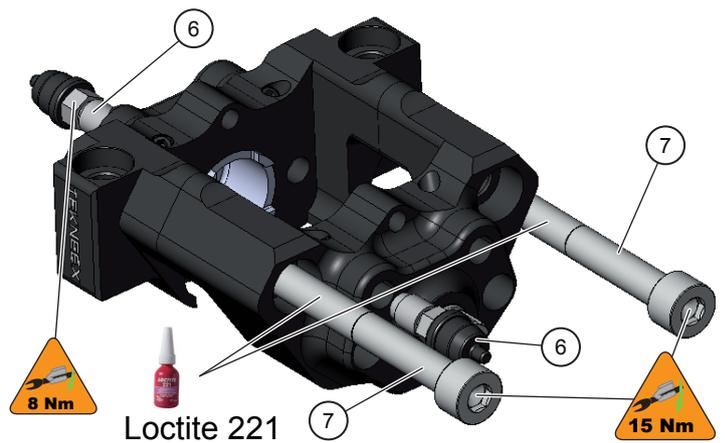
- Legend**
 11 Snap ring

- Place the snap ring (11) in the groove of the half calliper.
- Check that the snap ring (11) is correctly clipped in the groove of the half calliper.



- Legend**
 9 Piston
 10 Gasket
 16 Groove

- Apply PFG110 grease to the O-rings (10).
- Check that the bases of the grooves (16) are clean.
- Place the O-rings (10) in position in the grooves (16).
- Place the pistons (9) in position.
- Apply the same procedure for the second half-calliper.



- Legend**
 6 Bleeder screw
 7 Mounting screw

- Connect the two half-callipers.
- Tighten the 2 screws (7). Torque 15 Nm, applying a drop of weak thread locking compound to each screw.
- Tighten the 2 bleed screws and the cap (6). Torque 8 Nm.
- Reinstall brake pads (refer to the section on Cleaning/ Replacement of rear brake pads).



- Always use new seals and clips.
- Replace any defective parts, using only original SODIKART parts.
- Install a new set of pads after any servicing of the callipers.

6.2.2 - Replacing master cylinder seals and pistons



This operation must be performed by a Sodikart dealer.

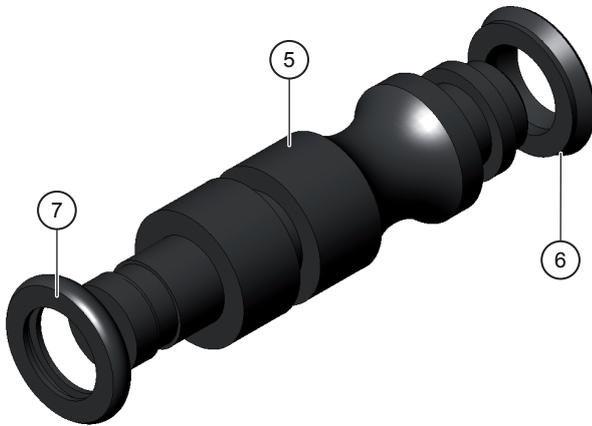
Removing



Legend

- 1 Pressure pin
- 2 Dust cover
- 3 Pin
- 4 Lever & piston

- Remove the two pressure pins (1) and the dust cover (2).
- Withdraw the pin (3) and remove the piston lever assembly (4) from the master cylinder.



Legend

- 5 Piston
- 6 Gasket
- 7 Seal

- Remove the gasket (6) and the seal (7).
- Clean the body of the master cylinder. Do not use WD40 or other greasy products to clean the master



Do not use any cleaning product that could damage the seals. A brake fluid leak could appear, causing a serious or fatal accident

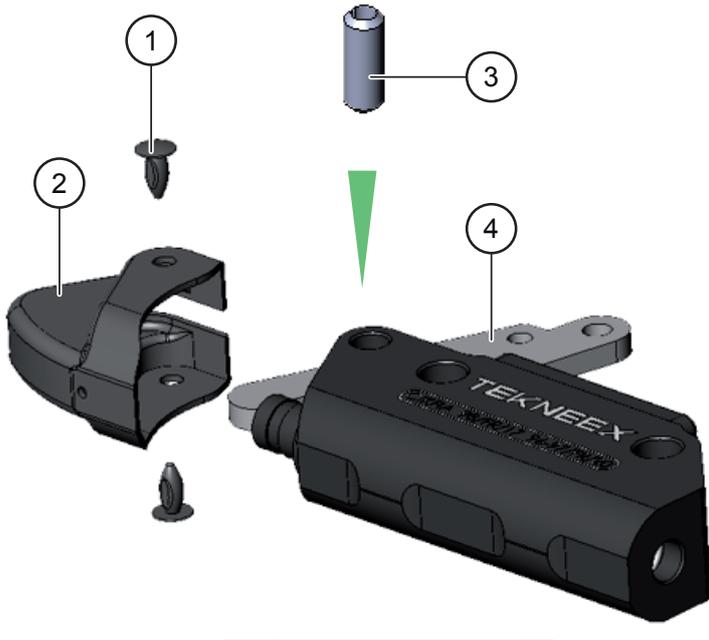
Reassembly



Legend

- 5 Piston
- 6 Gasket
- 7 Seal

- Apply PFG110 grease to the gasket (6) and the seal (7).
- Place the gasket (6) in the piston groove (5).
- Install the seal (7) on the piston (5).
- Apply PFG110 grease to the gasket (6), the seal (7), and the piston (6).



Legend

- 1 Pressure pin
- 2 Dust cover
- 3 Pin
- 4 Piston lever

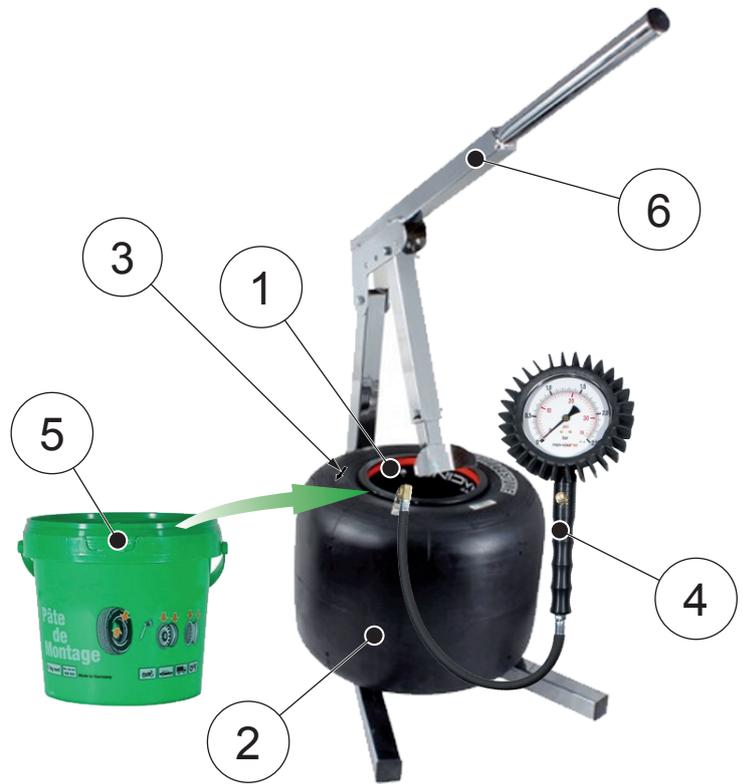
- Reinstall the piston lever assembly (4) in the master cylinder.
- Reinstall the pin (3).
- Reinstall the dust cover (2) and pressure pins (1) on the master cylinder.



- Always use new seals.
- Replace any defective parts, using only original SODIKART parts.

6.3 - Tyres

6.3.1 - Tyres change



Legend

- 1 Rim
- 2 Tyre
- 3 Direction of rotation
- 4 Inflation system
- 5 Grease
- 6 Tyre iron

- Place the kart on a trolley.
- Place the wheel on a tyre remover (OU942.002).
- Take the new tyre and grease the tyre (grease LU823.003 (5)) in order to make assembly and removal easier.
- Replace the tyre (2) on the valve side of the wheel rim (1) ensuring the correct rotation direction.
- Once in place, strap your tyre with a belt when you inflate more than 3 bars.
- Put the wheel back on the kart and tighten the nuts back again securely.
- Adjust the pressure with a manometer (4) (OU943.002).



- Always change the whole set whenever a tyre is changed (fronts, rears, or all the set).
- Always place the tyres so that they rotate in the direction indicated on the tyre wall.
- Never inflate the tyres more than 4 bars.
- Excessive wear of tyres can be result from bad front wheel axle unit alignment.
- Use tyres with a grip adapted to your track.



- Give worn tyres at a specialist of tyre treatment according to local environmental regulation.



- ▶ Change all damaged rims. A damaged rim may lead to a loss of tyre or loss of pressure and may lead to a serious or even fatal injury.
- ▶ Check the tyre wear daily. Worn or damaged tyres may lead to a serious or even fatal injury.
- ▶ Never run with worn or damaged tyres: a burst of tyre may lead to a serious or even fatal injury.
- ▶ Always blow up tyre with the pressure recommended by the manufacturer.
- ▶ Cold tyres have a reduced adherence, and increase the loss of control of the kart. This may lead to a serious or even fatal injury.
- ▶ Too much grip reduces the stability of the kart under impact, and lead to a tendency to go on two wheels. It also increases the risk of riding over.
- ▶ Store tyres in an appropriate area to prevent fire hazard.
- ▶ Never inflate above 4 bars: there is a risk of severe injury due to potential failure of the rim.

6.4 - Cleaning the chassis

The cleaning of the chassis and its components is to be done with a special cleaning product (refer to the ITAKA web site). Do not use the product on brake pads and brake calipers.

This fluid cleans, removes grease, protects, lubricates and protects the rotating parts from damp (stub axle, tie rods, etc).

- Protect the break calipers and the brake disk with a dry piece of cloth.
- Spray the whole kart with the cleaning product, and let it act for 30 seconds.
- Wipe the frame and the components with a dry cloth.



- Clean your kart on a regular basis: it is a good way to check it and detect damages, if any.
- The complete kart cleaning must be done after each run.



- ▶ Spray cleaning product on brake pads or brake caliper may reduce the braking ability partially or totally, and can lead to a serious accident.

6.5 - Maintenance summary

6.5.1 - Bolting

Before each use, check the state of the screws and bolts. Pay a special attention to the ones directly linked to the safety of the kart:

- Stub axle screw.
 - Steering tie rods ball joint screws.
 - Front and rear wheels bolts.
 - Rear wheel hub screws.
 - Engine support screws.
 - Seat screws.
- Damaged screws and bolts have to be changed.

6.5.2 - Steering

- Check daily the upper and lower column plastic support torque as well as stub axle screws.
- Make sure that front wheel axle unit is not out of line (stub axles bent or broken).
- Check that the tie rods are not damaged.

6.5.3 - Bodywork parts

- Parts of the bodywork must not be broken or have sharp edges.
- Check the body part fastenings.
- Whenever bodywork parts are changed, make sure that nuts and bolts are assembled with nuts on the inside and bolt heads on the outside, in order not to cause any injury.

6.5.4 - Tyres

- Take particular care when fitting tyres that they rotate in the right direction. Follow the directional arrows on the tyre wall.
- Check for tyre wear with the indicators in the tread. One must always be able to see them. Tears or tread separation must not be found.
- Before each session check tyre pressures.

6.5.5 - Braking

- Make sure before all sessions that the braking system is working properly.
- Brake fluid should not be black.
- Drain and change black fluid. Check levels.
- Ensure that brake pads are correctly fitted and do not fall below the minimum thickness of 6 mm (Lining + Steel support).
- Brake hoses must not show any leaks at connection points. Replace if damaged.

7 - Trouble shooting

7.1 - The kart will not brake

1. Is the brake pedal free?
2. Is the hydraulic brake pump container cap fully tightened?
3. Is there enough brake fluid?
4. Are the hoses correctly connected?
5. Are the brake pads worn?
6. Is the calliper fully tightened on its support?

7.2 - The kart brakes continually

1. Is the brake fluid old?
2. Is the brake disk correctly centred in relation to brake pads?
3. Is the calliper fully tightened on its support?
4. Is the brake pedal too tight?
5. Are the brake pads correctly assembled?

7.3 - The kart is hard to turn

1. Are the stub axles tightened to torque specification?
2. Is the front axle unit checked?

7.4 - The steering of the kart is not precise

1. Are the front wheels tightened?
2. Are the stub axles to torque tightening specification?
3. Are the column plastic supports tightened to torque specification?
4. Are the tie rods correctly assembled and to torque specification?
5. Is the front wheel axle unit adjustment checked?

7.5 - The kart tends to go to the side

1. Is the front wheel axle unit adjustment checked?
2. Are the tie rods correctly assembled?
3. Are the tie rods locking nuts securely tightened?
4. Is there a tie rod bent or broken?
5. Do the rear wheels have exactly the same circumference?

7.6 - The kart skids very much on bends

1. Are the tyres worn?
2. Are the tyres inflated to the recommended pressures?
3. Is the rear axle adjustment suited to the track conditions?
4. Is the front wheel axle unit adjustment correctly checked?

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Track:

Pilot:

Trial:

Date: Time:

TRACK

State of the track: _____

Temperature: _____

ENGINE

Carburator type: _____

Adjustments: _____

Exhaust type: _____

Gear ratio: _____

Length: _____

Chain length : _____

CHASSIS

Stub axle height: _____

Caster / Camber: _____

Parallelism: _____

Seat position: _____

- Height: _____

- Distance axle: _____

- Distance fork: _____

Masses: _____

Axle type: _____

Stiffeners: _____

Notes

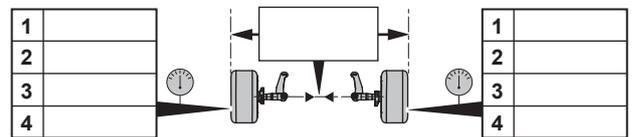
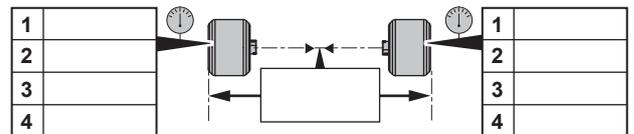
TRIAL TIMES

Tyre type: _____

Diameter: _____

Lap	Partial 1	Partial 2	Partial 3	Partial 4
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				

Pressure start / Wheel unit width



Pressure arrival

