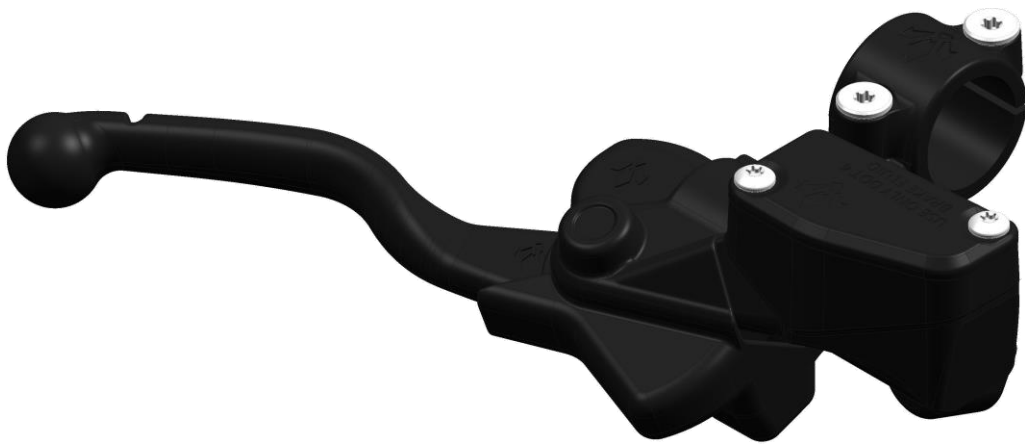


Cargo Bike Brake



Service Manual – 







Index

Important informations	3
Required tools	4
Brake setup	5
Brake master cylinder	5
Brake caliper	6
Maintenance	6
Brake pads replacement	6
Bleeding process	8

Important informations

IMPORTANT	
	Repeatedly using our products in extreme conditions requires more frequent servicing. Using unrecommended high-pressure washing methods, using unrecommended spare parts, solvents and lubricants not recommended by  Formula reduce the life span of our products..

IMPORTANT	
	<ul style="list-style-type: none"> Formula recommends only ORIGINAL spare parts and lubricant products. Formula recommends to contact a specialized mechanich.

SAFETY INFORMATION	
	Always wear nitrile gloves and safety glasses when working on the fork. Ensure correct disposal of waste materials and liquids


TORX® is a registered trademark of CAMCAR / TEXTRON INC. All trademarks are property of their respective owners.

Required tools

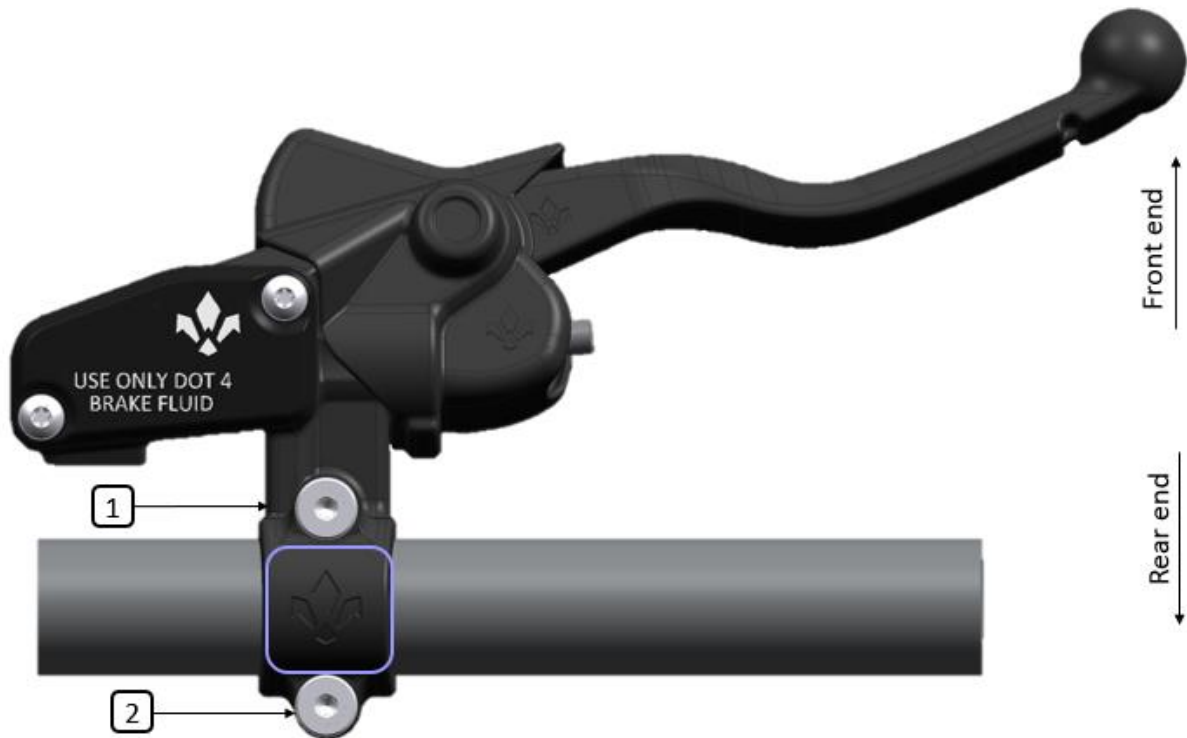
- Torque wrench with TX20 tool.
- Torque wrench with HEX 3 mm tool.
- Torque wrench with Torx T10 tool
- DOT 4 Formula oil

Brake setup

Brake master cylinder

Place the master cylinder on the handlebar at the desired position. The lily  on the clamp need to be faced towards the cargo bike front end. Tight the first screw (1) with a torque wrench with TX20 tool at 8 ± 0.5 Nm. Tight the second screw (2) with a torque wrench with TX20 tool at 8 ± 0.5 Nm.

The hose needs to be attached to the fork or the frame in a way that doesn't interfere with the free flow of fluid through the hose. The hose should not make curves smaller than 20 mm radius and should not interfere with any moving part of the cargo bike.

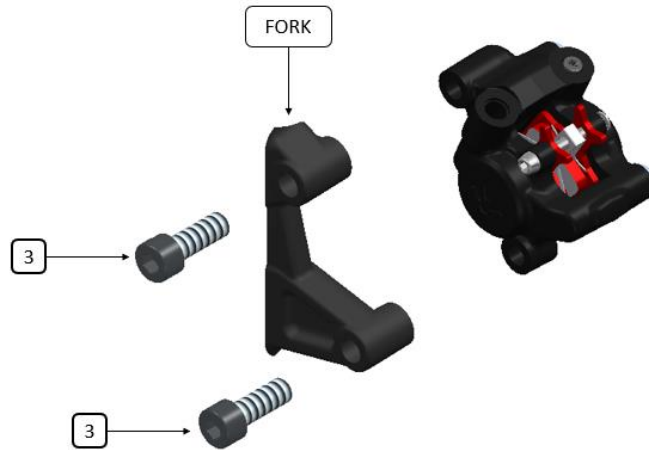


Brake caliper

Brake caliper can be mounted directly on the fork or by using an adapter (you can find a list of them on Formula website).

Tight the screws (3) with a torque wrench at 9 ± 0.5 Nm.

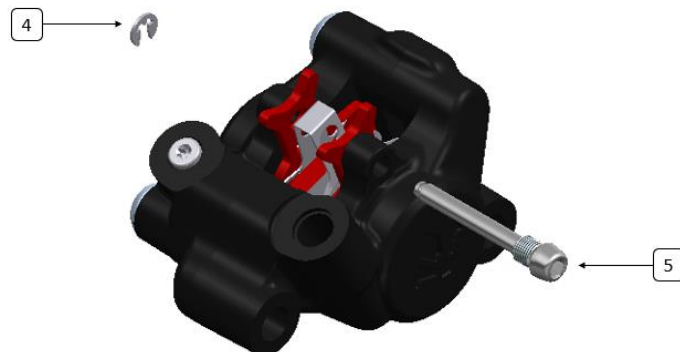
In case you're using a fork with PM fitting with an adapter, pull the brake lever 2/3 times so that the caliper is centered respect to the rotor, keep the lever pulled and tight the screws that connect the adapter to the fork.



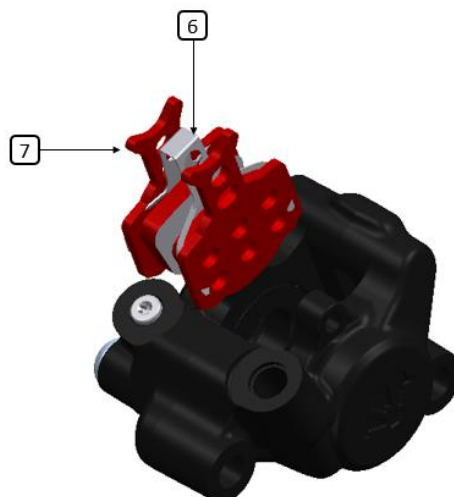
Maintenance

Brake pads replacement

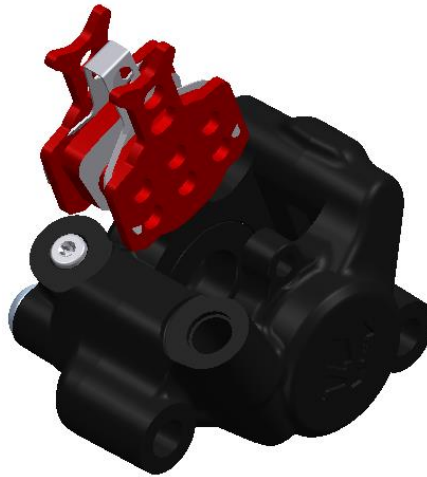
1. Place the pistons back in their seats using a screwdriver between the pads.
2. Remove the seeger (4) and unscrew the pin (5) with a HEX 3 mm key.



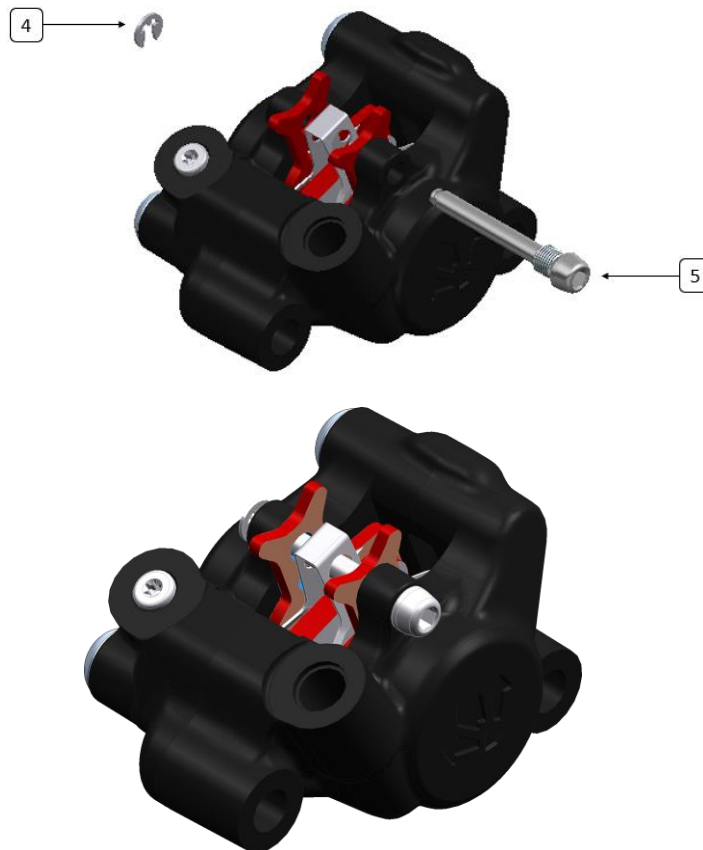
3. Remove the pads (7) and the spring (6).



- Place the new pads in the caliper



- Insert the pin (5) and tight it with a torque wrench with HEX 3 mm tool at 2 ± 0.25 Nm. Place the seeger (4) in its seat.



- In case the brake performance are not satisfactory, proceed with the bleeding process, as shown in the paragraph "[BLEEDING PROCESS](#)".

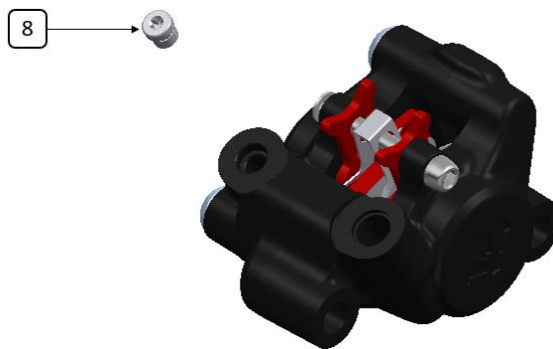
Bleeding process

1. For the bleeding process it's very important that the bleeding hole on the caliper is faced upwards. If it's necessary, remove the caliper from the bike, removing the screws (3). Place the pistons back in their seats using a screwdriver between the pads and place the pad spacer in between (it is needed only if the brake rotor is not present).

⚠ During this operation it's important to protect the pads from any possible oil contamination.



2. Remove the bleeding screw (8) with a Torx T10 key



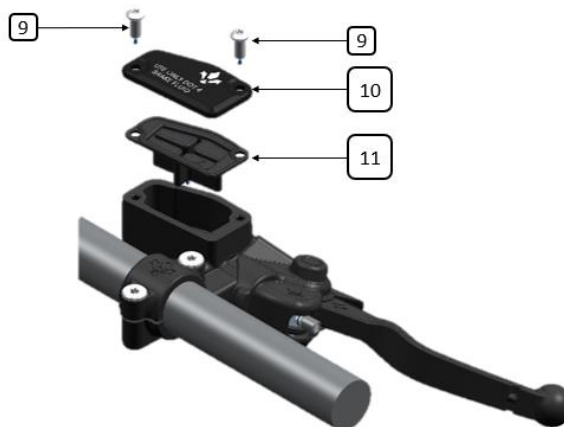
3. Rotate the master cylinder on the handlebar so that the reservoir is horizontal



4. Fill the syringe with DOT4 oil, removing any bubbles that may be formed during the process. Place the syringe with the M5 grub in the hole where the bleeding screw (8) was placed on the caliper.



5. Remove the screws (9) with a Torx TX20 . Open the cap (10) and remove the bladder (11) that is placed inside the reservoir.



6. Using a syringe remove the oil that it's present in the master cylinder reservoir



7. Press the syringe caliper side until the oil reaches half the height in the master cylinder reservoir.



8. Remove the old oil present in the master cylinder reservoir using a syringe.



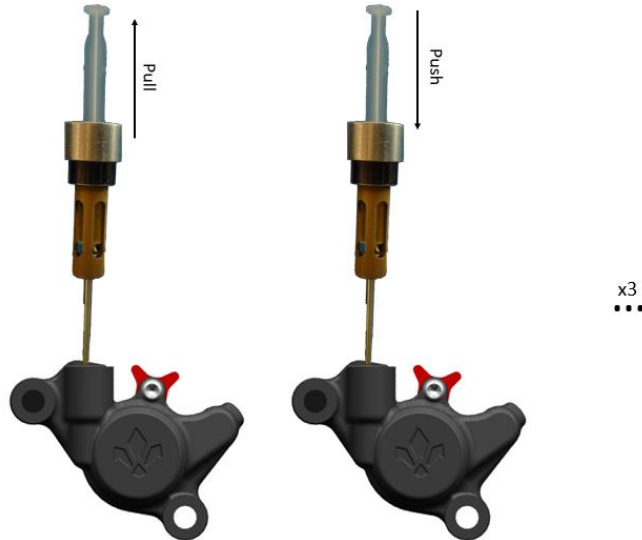
9. Pour some new DOT4 oil from a sealed bottle in the master cylinder reservoir.

IMPORTANT



In the next steps, please pay attention to not let any air inside the circuit, checking that the oil level is always enough.

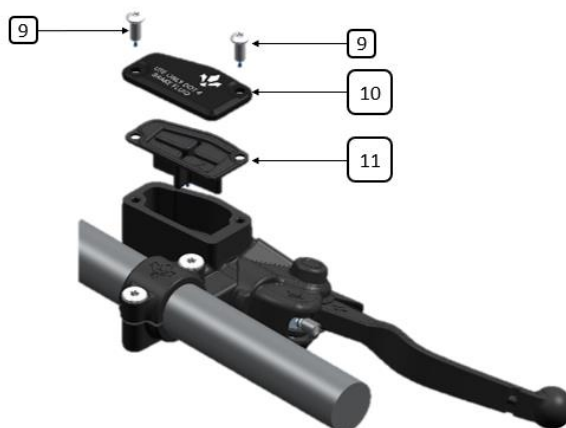
- Fix the lever at the handlebar with a rubber band, so that the circuit is pressurized. Pull and push the syringe caliper side three times. Once finished, remove the rubber band and release the lever.



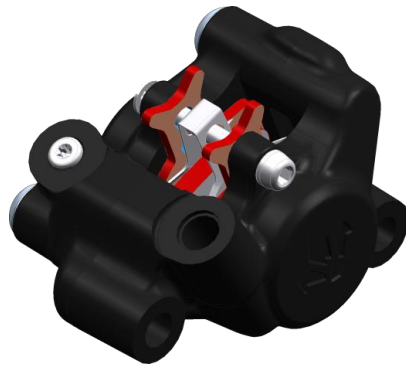
- Put some new DOT4 oil in the master cylinder reservoir until it reaches 3 mm from the superior edge.



- Insert the bladder (11) back in the reservoir. Place the cap (10) and tighten the screws (9) with a torque wrench with TX20 tool at 1.25 ± 0.25 Nm.



13. Remove the syringe on the caliper and tight the bleeding screw (8) with a torque wrench with torx T10 tool at 1.25 ± 0.25 Nm.



14. Clean the caliper and the mastercylinder from any oil residual with brake cleaner and wipe with a cloth.

<https://www.rideformula.com/it/>

FORMULA S.r.l.

Via Erbosa, 63 - 59100 Prato (Italia)

Tel. +39 0574 603 609

Fax +39 0574 611 046

Reg. Imprese Prato / C.F. / P.IVA 02081070977

PEC: formula-italy@legalmail.it

Cap. Soc. 500.000,00 € i.v.

I contenuti di questo documento possono essere modificati senza preavviso. Tutti i diritti riservati.

Revisione 0 – Febbraio 2024