



**Paramotors**

**NITRO 200  
TORNADO 280**

## **User's Manual**



**Edition: V2.0**

**This manual is intended to be for informational purposes only. The manual's content is based on the best knowledge available at the time of publication. We put every effort to correct the mistakes we encountered but we cannot guarantee that all errors have been found. This is why errors found in this manual cannot be treated as the basis for any legal claims. Information included in the present publication are the property of the Air Conception company.**

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## 1. Introduction

Congratulation on joining the Air Conception family! We know that you are a person who embraces adventure, follows your passion and has found the beauty of flying as an important component of life. We are happy that you decided to pursue your passion with our equipment and are here to support you, as you progress through this journey into the sky!

We are pleased to welcome you as our customer.

### 1.1 Limitation of Liability

**Remember! In certain circumstances, paragliding & paramotoring could be extremely dangerous. An accident on the paraglider could result in severe disability or even death. Paragliding & paramotoring is allowed only in weather conditions that are not conducive to dangerous situations.**

 **Warning: The paramotor is only a device that supports the flight of the paraglider. Thus, in case the engine stops working during the flight, you have to be always prepared for safe landing.**

**You should never fly above reservoirs, vast forests or other areas where safe landing is impossible when the paramotor's breaks down, you lack fuel or you experience other unpredicted situations. You should also remember that each country has its own air traffic regulations. You should read existing regulations before starting your flights in a given country.**

**If you want to paraglide with paramotor you must have a license, which can be obtained by attending special training. Paragliding with paramotor without license or third party insurance is forbidden. In some countries, you can take off and land only on the areas specially designated for these purposes. Moreover, radio communication is often obligatory. If you plan to paraglide get to know about aviation areas in order to avoid the places where flying is forbidden.**


**Although we took all necessary precautions in order to provide you with the equipment that is maximally safe and without structural and material defects, you must be always ready for safe emergency landing. You should always keep adequate altitude and distance margin that is indispensable if you want to fly safely to the landing area.**


**The fact that the engine at work is extremely dangerous means that using it and performing any operations with it is forbidden after drinking alcohol.**


**Air Conception paramotors are designed only for amateur use. They are not designed for participating in sport competitions, aerobatics, or stunts. They are neither designed for commercial purposes. We accept no liability for any financial losses and lost revenues caused by the paramotor's breakdown, waiting time for repair and spare parts, as well as health and property damages incurred by the third party.**


**It is not allowed to make any modifications or adjustments, to use non-original spare parts, and to make repairs without the permission and control of the producer or its authorized representative. Such actions cause the loss of the warranty rights. They could also lead to problems with the working of the equipment, serious equipment damage, and severe body damage including the risks to the pilot's and the third party's lives. The pilot is obliged to follow all instructions that are included in this manual.**

## **1.2 The meaning of symbols used in the manual**

 Warning: This indicates the instruction that should be followed if you want to avoid harming or risking the life of the pilot, mechanic or third party.

 Attention: The instruction that should be followed if you want to avoid a severe engine's damage. In some cases, not following this instruction could result in health risks.

 Important: Information that are important during the exploitation.

 Note: Information that help in using the equipment and in its proper maintenance.

 Indicates maintenance activities.

 Indicates check-up activities.

## 2. Preparing the paramotor

### 2.1 Package content

The complete standard version of your Air Conception paramotor includes the following items:

- |  |       |
|--|-------|
| 1. Frame with engine and harness                         | 1 pc. |
| 2. Propeller cage  | 1 set |
| 3. Propeller   | 1 pc. |
| 4. Propeller mounting screws                             | 1 set |
| 5. Optional cage bag & prop covers                       | 1 set |
| 6. Two batteries with one charger (e-start version only) | 1 set |
| 7. User's manual on USB key or online link for download  | 1 pc. |


✓ The serial number of the propeller is on the inner surface of its hub and is visible when separated from the paramotor.

✓ The serial number of the engine is stamped on the casing.

### 2.2 First time paramotor assembly

#### 2.2.1 Mounting of the propeller

The propeller is mounted with six M6 screws steel or titanium depending on model with washers. The set of propeller mounting screws with the red aluminum washer (propeller screw plate) can be found in the side pocket of the harness or in the a cage bag pocket. Propeller mounting screws must be screwed cross-wide in two stages: first – using 6 Nm torque – then you should check blade axial wobbling. The difference between the trail of both tips of the blade should not exceed 8mm. In second stage, screws must be tightened using 10 Nm torque. If the difference of the trail exceeds 8mm you should loosen the screws and then tighten them cross-pattern once again but this time using bigger torque on the side of the blade that sticks out more from the engine. You should not use any washers under the propeller because they can break off the screws that hold the propeller during the flight.

 For mounting of the propeller use allen key 5. Tools are not included in the package.



You should not tighten the screws that hold the propeller by using torque bigger than 10 Nm.

### 2.2.2 Propeller cage mounting

Begin mounting the propeller cage by inserting 6 carbon tubes into the frame. Care must be taken as they are 3 different lengths. Please check the following table to know the position of each carbon tube on your frame.

	<b>Delta 140 cm frame</b>	<b>Delta 150 cm frame</b>	<b>Delta 165 cm XL Al. frame</b>	<b>Delta 165 cm XL Ti. frame</b>	<b>Race/Split v1/v2 140 cm Ti. frame</b>	<b>Race v2 150 cm Ti. frame</b>
2x upper carbon tubes length	52 cm	55 cm	61 cm	62 cm	61 cm	66 cm
2x middle carbon tubes length	51 cm	55 cm	63 cm	62,5 cm	51 cm	56 cm
2x lower carbon tubes length	52 cm	59 cm	64 cm	64 cm	56 cm	61 cm

Next, after stretching out the cage's frame with the net, insert all 4 parts of the cage into the carbon tubes. The next step is inserting the black C-clips that connect the cage directly with the lower part of the frame. When all the elements of the cage are connected you should tighten the netting by pulling the rope in the lower part of the security net. This is designed to pass through the spring and pull back on itself. The last, but very important step, is mounting three security Velcro bands, which prevent the cage from accidentally unfastening. The velcro is there just to hold it closed you do not have to pull it very strongly.

✓ After mounting the propeller cage you should once again check if it is correctly mounted and protected.

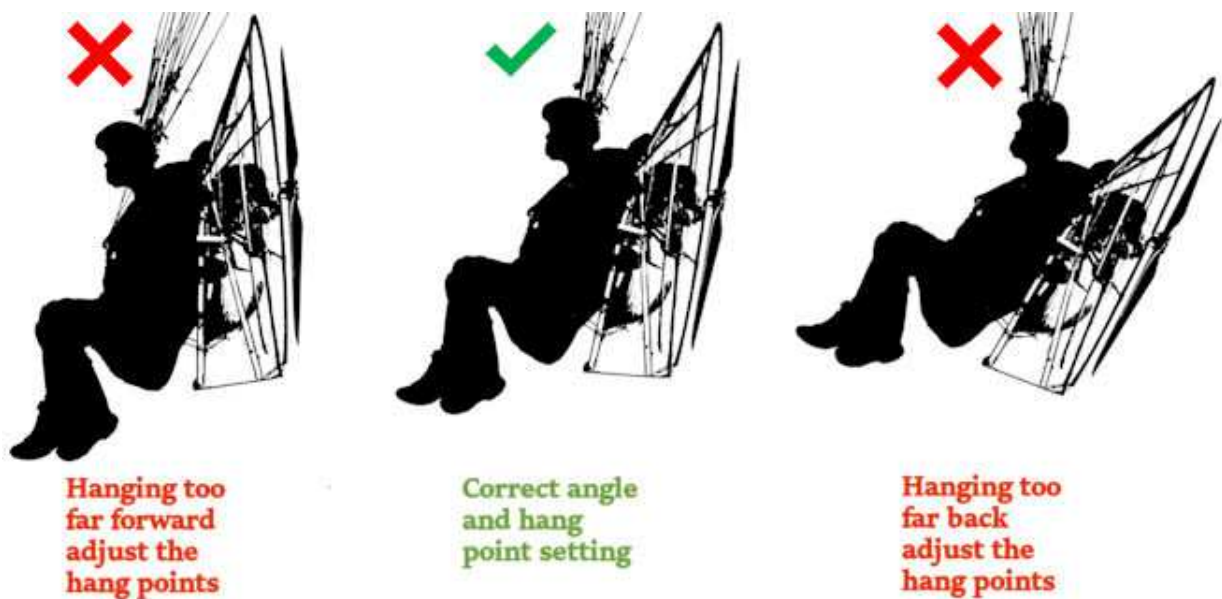
☞ It is recommendable to memorize the exact sequence of all activities.

### 2.2.3 Harness adjustments

Proper hang point and harness adjustment is necessary for maximum thrust at take off, flying comfort, and ease of launch. This adjustment is ideally done with the all-up weight of the pilot.

1. SUSPEND THE PARAMOTOR: It has to be suspended from the hang points with the pilot sitting in the harness.

2. ADJUST THE HANG POINTS: Loosen the head screws on the black collets so that they can move along the bars. The propeller axle should tilt slightly backwards as shown by the following picture:

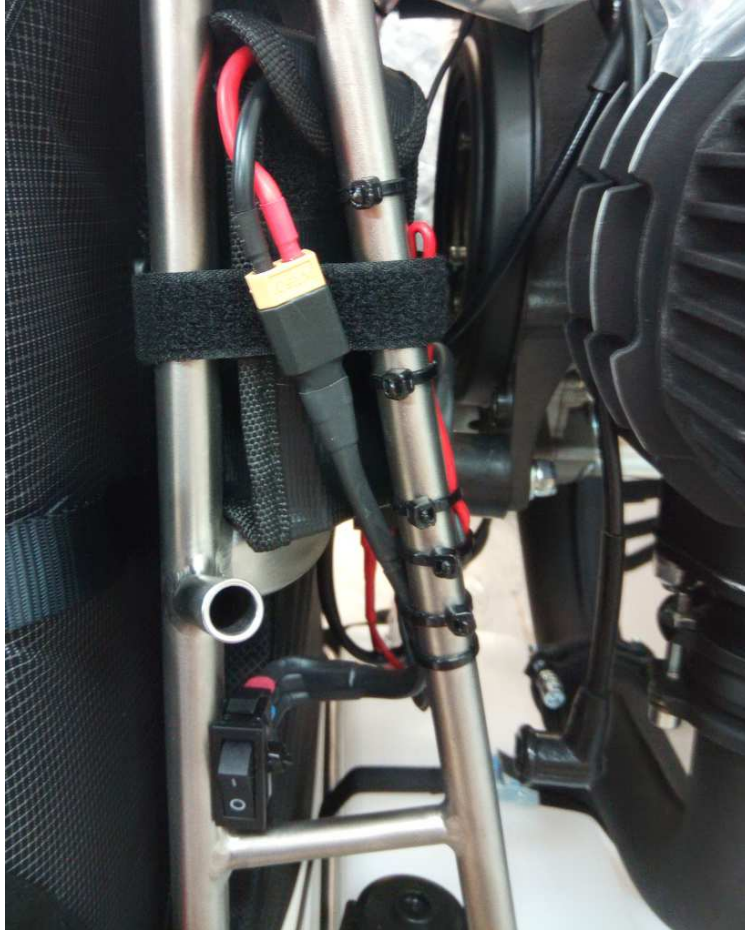


☞ For the best torque compensation in flight, please place the black collet under the right pilot arm 1 cm more forward than the collet under the left arm. When the adjustment is done, tighten the collet screws.

**⚠ Warning: If you forget to adjust the harness or you do it improperly, it could cause serious problems during the flight or it could even prevent you from taking off.**

#### 2.2.4 Battery mounting (e-start engine only)

The battery has to be mounted according to this picture:





### 3. Fuel

The two-stroke engine in your paramotor requires using oil-petrol mixture in **1:66 (1.5%)** ratio during regular usage and **1:50 (2%)** when you break in the engine.



**Warning: Fuels are extremely flammable liquids and their fumes are explosive. You mustn't use open flame while preparing the mixture, refueling or when you are close to the place where you store it. You should handle fuel very carefully. Do it only in well-ventilated places or in the open air.**



Attention: Remember to use only unleaded petrol with an octane rating minimum 91.



In order to correctly prepare the fuel-oil mixture, you should use a special canister.



Warning: You should not mix the fuel with oil in the paramotor's fuel tank, especially if the tank was empty before refueling.



You should only use **two strokes synthetic or semi-synthetic oils**. Try to find out what oil grades are available and popular in the place where you live or in the area where you want to fly on a regular basis. If you choose a particular oil grade try not to change it. If it is necessary, try to change it as rarely as possible. The Nitro 200 and Tornado 280 engines are not designed to work with marine or mineral oils!



Warning: Mixed fuel loses its properties with time. Do not use the mixture that has been sitting for over a month. Try to plan the amount you will need for your flight and prepare only as much mixture as needed. If you are going to store the paramotor for a long time, you should empty the tank completely.



The majority of contaminations that get inside the fuel tank come from a contaminated funnel. After filling the tank, petrol immediately evaporates from the funnel surface and it leaves a thin oil layer. Dust and various small and big molecules stick to this layer. Some of them get inside the fuel tank because they cannot be stopped by the filter. These contaminations get into the tank during the next refill. That is why one of the most important aspects of keeping the tank clean is protecting the funnel from dirt in between refills. This task is very often neglected by the users.

**We strongly recommend to pre-filter the mixture before pouring it into the tank.** Poor quality of the fuel or storing it in dirty containers are the most common causes of engine problems.

## 4. Priming & Starting the engine

Every time you want to start up the engine you must secure the gas throttle in such a way that it will not be possible to turn it on by accident. You should also check whether the carburetor throttle is not left ajar. In case you need to turn the engine off immediately, the gas throttle should be placed in such a way that it is possible to reach quickly and easily for the ignition switch. Engine should always be started on a secured rack or on your back to minimize risk of injury.



**Warning: It is obligatory to check the working of the gas throttle each time you want to start up the engine.**

### 4.1 Priming the engine

In order to insert fuel inside WB37 carburetor, you need to pressurize the fuel tank by blowing into the fuel tank vent pipe. Delicately press the membrane through the special opening in the carburetor's cover. In this way you will be able to open the valve and enable the flow of fuel. Watch as the fuel passes through the fuel line and enters the carburetor, once the fuel enters the carburetor keep blowing for an additional second to ensure the mixture is rich enough to start a cold engine. It is usually enough to estimate 1cm of fuel passing through into the carb.



**NEVER START THE PARAMOTOR WHILE STANDING ON THE GROUND, IT MAY RESULT IN SERIOUS INJURY & EVEN DEATH!**



When you start up the paramotor, ALWAYS start on your back or on a secured rack.



**Warning: All engine trials performed when the propeller is spinning must be undertaken with utmost caution. On your back or using a specifically bench. You must not hold the propeller's cage! If you do this, the engine's thrust might bend the cage towards the spinning propeller. Always make sure the propeller's cage is properly mounted on the frame and is protected.**

A properly regulated and primed engine usually starts after one or two pulls (pull starter version) or two seconds of electric starter use. A well tuned engine works steadily at idle speed, though immediately after the start-up the speed is much higher than 2000 rpms and decreases during the warm-up. When you have problems with this, the reason might be:

- **Over-flooding** – too much fuel in the carburetor

Symptoms: When engine starts with a few strokes and cuts out, but with each start-up attempt engine works a little bit longer and then cuts out, we are dealing with a too rich mixture. When engine is over-flooded it might be necessary to push slightly the handle throttle and change the sparkplug for a dry one.

- **Not enough fuel**

Symptoms: The engine does not start at all, or works shorter with each start-up till it ceases to start. In that case one should add a small amount of additional fuel into the carburetor.



Warning: Do not flood the carburetor with additional fuel when the engine is still warm – it might damage the spark plug isolator or cause problems during the next start-up.



Warning: For electric start motors, never continuously run the starter for more than 2-3 seconds, and allow the starter a 10 second cool-down in between starting attempts. This will dramatically increase the lifespan of your starter.

## 4.2 Turning off the engine

In order to turn off the engine you should reduce all power and push the red button on the gas throttle, wait till the engine stops completely. If you release the button earlier the engine will start up again.

## 4.3 Emergency engine stop

In the event that the kill switch malfunctions; the engine can be turned off by bending the fuel line until the engine stops. In addition the engine can be killed by removing access to air through covering the air box intake ports.

## 5. The run-in and the engine use

### 5.1 New engine inspection on the ground

Every engine in a new paramotor has been already switched on and initially regulated. Due to the fact that membrane carburetors are sensitive to changes in atmospheric pressure, humidity etc., the adjustment of the idle speed might be needed. You should perform the initial run-in on your back on the ground right before the first flight.

When you start up the cold engine you should briefly warm it up (1-2 minutes) at 3000 rpm. Then increase it to around 4000 rpm and keep like that for around 30 seconds. Next, you should check the idle speed, and check how the engine reacts to rapid opening of the throttle. If the engine chokes you should increase the speed again to around 4000 rpm for around 30 seconds and try to accelerate once again. If the engine is properly regulated and warmed-up it smoothly reacts to the changes in position of the throttle. If the engine after warming-up chokes during rapid opening of the throttle you should enrich the idle speed mixture by delicately loosening the "L" screw. Contact your local Air Conception representative if you have any questions. Improper adjustments of the carburetor can lead to the engine seizing and void the warranty.

### 5.2 The run-in of the new engine on the ground

After warming-up the new engine you should initially set its speed. In order to do that you should start up the engine and try to keep the speed at around 4000 rpm for 30 minutes. After that time, you should increase the speed to 6000 rpm and keep it for around 10 minutes.

Next, you should check whether the engine reacts properly and smoothly to speeding from idle to maximum. You should also check whether the engine does not choke and does not have the tendency to cut out.

If you observe any alarming symptoms please contact the distributor or Air Conception directly.

### 5.3 The run-in of the engine in the first hours of flight



The run-in during the flight is divided into two stages:

First stage involves making the first take-offs and first flights maintaining the lowest possible speed. Maximum speed must not be reached unless it is absolutely necessary and it should take as short as possible. High altitudes are not advisable, but if necessary, they should be reached in steps, making pauses while ascending in order to cool the engine. We advise you to maintain high ascent for no longer than half a minute, then keep lower ascent for about one minute.

**The first test flight should take no longer than 10-20 minutes. After landing you should check combustion conditions by checking the condition of the spark plug.**

☞ Spark plug evaluation in the engine working previously for a long time at idle speed is not reliable. For proper evaluation you should turn the engine off after a few minutes on medium and high speed (horizontal flight) and land on the turned-off engine.






**Attention: Evaluating the state of the spark plug is the only one way of checking whether the mixture's composition is correct!**

Second stage: If the spark plug has dark color or is black after the test flight, we can continue flying also using maximum engine power.



**Warning: The greatest threat for the engine is when it is working on too lean mixture. This leads to rapid temperature growth of the piston crown, and could result in melting or burning of the piston crown. In such case, serious damages of cylinder, piston and crankshaft bearing could appear. In practice, it means very high repair costs. Due to the fact that only the user is responsible for mixture composition, the producer takes no responsibility for damages caused by overloading the engine thermally, engine seizure, tearing off the connecting rod, jamming the piston rings, using inadequate oil, or using a not correct amount of oil!**

## 5.4 Spark plug diagnosis

			
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
<b>Mixture is too lean – it could damage the engine</b>	<b>Mixture is rich, but correct for the run- in time</b>	<b>Optimal mixture (dark grey or chocolate color)</b>	<b>New spark plug – for comparison</b>

☞ During the run-in time a wet and tarry spark plug is a good sign because it means that the mixture is rich. Petrol in a two-stroke engine is not only a fuel, but also a heat conductor, which is emitted excessively during the run-in. During the run-in time, we advise you to error on the side of caution and use a rich mixture at the expense of slightly weaker engine performance.

☞ During the run-in time it is generally recommended to use the engine on differential speed and not to keep one speed for a long time (e.g. long flight on a steady altitude).

ⓘ Manipulating gently with the gas throttle during the run-in and acting according to the guidelines described above will lead to sustained and trouble-free engine running and significantly prolong the amount of time before the first repair. If the user intentionally does not follow the guidelines presented above, it will cause the loss of any warranty rights or the engine's damage. It is important to bear in mind that preserving the engine in the best shape during further exploration depends on how we handle it in the first hours.



The run-in time for the "Nitro 200" or "Tornado 280" engine is about 10 hours of flight.

☞ The practical way of estimating the length of run-in stage is using up 1 liter bottle of oil.

☞ We advise you to mount a tachometer, which facilitates both evaluating the engine's state for basic adjustments and serves as an hour meter.


## 5.5 Regulating the carburetor during the run-in time

Before sale every carburetor is set to default, factory settings.

You only need to regulate the idle speed because it changes together with the changes in atmospheric pressure (horizontal screw lifting the throttle lever).

After the warm-up, we set speed on 2100-2200 rpm or so that the engine could work steadily and would not cut out. A tick any lower than 2100 rpm could damage the engine.

During the run-in time you should avoid changing mixture composition (the L and H screws) even if the spark plug check-up shows that the mixture is too rich. At this time, your priority is lubricating and preventing the engine from overheating.

 **Each newly purchased spark plug has about 1 mm space between the electrodes. You must necessarily reduce it to 0,4 mm.**



When the engine is hot, the temperature of some exhaust system parts may exceed 300° C. Touching the engine, even by accident, may cause serious burns.



Your paramotor is to be used with E-props (Electravia) propellers.

Using other propellers is not recommended. For instance, too "ballasted" ones might lead to accelerated engine wear. Damages caused by using inadequate propellers are not covered by the warranty.



**When the paramotor is running with a damaged, unevenly balanced or not correctly routed propeller, the gear unit components and rubber parts wear off very quickly. The gear unit damages due to the use of inadequate, damaged, unevenly balanced and incorrectly routed propeller are not covered by the warranty.**

## 6. Pre-flight inspection and adjustments

### 6.1 Pre-flight paramotor inspection

Checking up the paramotor before taking off includes obligatory inspection of the propeller cage mount and gas throttle performance. The propeller inspection entails checking that it is mounted securely and inspecting for mechanical damages or cracks.

☞ The propeller should rotate steadily, and silently. Whistles or whizzes indicate blade damage.


 **Never put your hands into the propeller space when the engine is on, even if the propeller does not rotate.**

 **Never turn on the engine without mounted and secured propeller cage.**

 **Never leave the paramotor turned on without supervision, especially with the gas throttle lying on the ground. If you step on it accidentally it may cause serious injuries.**

- Check harness, tapes, joints and carabiners. Check the condition of all rubber parts of the paramotor. Check all the accessible screws - whether they are not broken, missing, loosened. Check the engine power supply system, filter and fuel pipes - whether there are no leaks that could lead to sucking-in the "fake" air.
- Check the mounting of the engine, the exhaust system, mounting of the airbox, silencer, and pay special attention to the condition of rubber parts.
- Check the propeller cage ropes, speed ropes and footstool. Make sure that starting the engine will not suck in other objects by the propeller - i.e. gloves, radio cables, helmet or loose clothing parts. Make sure that turning the engine on will not pose any threat to other objects or third party.

☞ Monitoring the engine technical state after each flight is strongly advised. By doing this you can avoid mistakes during the pre-flight as you rush to get in the sky.

 **Never perform maximum thrust test with the paramotor standing on the ground. If you want to do this put the paramotor with the turned off engine on your back and then turn the engine on.**

☞ We advise you to start up the engine while keeping it on your back and then to lean forward to perform an high speed test (it should take a few seconds). It will help you to "push" any rest of the air into fuel system and it will warm up the engine to the optimal temperature. Moreover, it will enable you to evaluate how the engine is running on high speed.



## 6.2 Basic engine adjustments

### WB37 Carburetor adjustments

The most frequent activity is adjusting the idle speed. Membrane carburetors are quite sensitive to the changes in atmospheric pressure. It means that there are days when the engine works properly at idle speed, and days when it works unevenly, cuts out or, for instance, works on too high speed.

 **Attention: All carburetor adjustments should be performed after warming up the engine (approximately 2-3 minutes on low and medium speed).**

If you notice that it takes too much effort for the engine to start and it does not work evenly on low speed or if it works unsteadily (e.g. has a tendency to cut out), you should correct minimum speed settings. It is usually enough to adjust the throttle's position with a screw (horizontal screw lifting throttle lever), but in some cases it is necessary to change the composition of the idle speed mixture.

WB37 carburetor has three screws that can be regulated. These are: throttle positioning screw, idle speed mixture composition screw (L for low speed) and highspeed mixture composition screw (H for high speed).

#### **Default mixture composition screws settings for Nitro 200 engine are as follows:**

The L screw unscrewed for 1 turn from closed position.

The H screw unscrewed for 1 turn from closed position.

#### **Default mixture composition screws settings for Tornado 280 engine are as follows:**

The L screw unscrewed for 1 turn from closed position.

The H screw unscrewed for 1 turn & 10 minutes from closed position.

## 7. Other maintenance operations


### 7.1 Pre-flight paramotor inspection

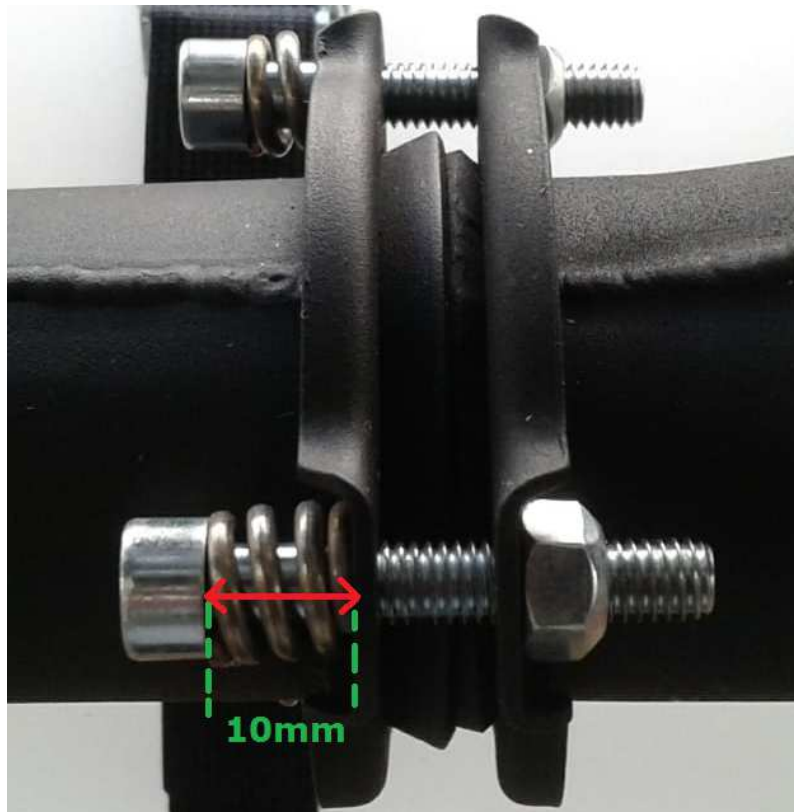
- Check and evaluate general state of the paramotor's parts by looking for cracks, leaks etc.
- Check the engine mounting, check the fuel system for leaks, and check the way the shifter and the throttle work.
- Pay special attention to the state of the exhaust system. Check the silencer mounting, condition of all threaded connections, and rubber shock absorbers.
- Check the propeller's mounting, clean oil deposits, soot and other impurities from the propeller. Cleaning the propeller with a piece of cloth will help you to find cracks and other damages.
- Check the electric installation thoroughly looking for mechanical damage, abrasions, joints or some disconnections between the elements.
- Check the engine starter.
- Pay special attention to all leakages, scratches and atypical stains. In case of any doubts, contact an Air Conception representative.
- Check the frame and the propeller cage. Check the construction's geometry. Inspect thoroughly harness settings, condition of tapes, carbines and braking system.


### 7.2 The paramotor's maintenance and servicing – recommended operations

#### After first and every 5 hours:

1. Check the tightening of all screws and nuts (visual control).
2. Check the tightening of the cylinder head nuts (torque=23 Nm).
3. When engine is cold, check the tightening of the two M8 exhaust collector nuts (23 Nm).
4. Check the spark plug – condition of electrodes and spark plug hue.
5. Check the engine regulation.
6. Check the tension of the transmission belt. Belt tension has to be 380 Hz.
7. Check the compression of the 6 exhaust springs. The 6 screws and nuts need to be tight up to get a 10 mm springs length.
8. Airbox and airbox rubber checkup.

 Compression of the 6 exhaust springs is very important. Too tight springs will create stress on the exhaust system and may cause exhaust cracking. Springs that are not tight enough with a length of more than 10 mm may also cause exhaust cracking.



 Not tight enough transmission belt may cause the engine hard or impossible to start and will cause accelerated belt wear.

**Every 25 hours:**

The same activities performed after 5 hours plus:

1. Clean the carburetor (internal mesh filter).
2. Check and clean decompression hole inside the cylinder.

**Every 50 hours or once a year:**

The same as every 25 hours plus:

1. Replace the starter rope (if any).
2. Check the exhaust silencer condition.
3. Replace the transmission belt (non-clutch engine only).

**Every 100 hours:**

The same activities as every 50 hours plus:

1. Remove carbon deposits from the combustion chamber.
2. Replace the cylinder head gasket.
3. Replace the manual fuel pump (if any).
4. Replace the airbox rubber.
5. Replace the exhaust rubber mounts.
6. Replace the spark plug.
7. Clean or replace the main fuel filter inside the tank.
8. Replace centrifugal clutch.
9. Replace the transmission belt.

**Every 200 hours:**

The same activities as every 100 hours plus:

1. Replace the membrane valve petals.
2. Replace the piston with piston rings and needle bearing.
3. Replace the reed valve petals.

## 8. Tightening torque

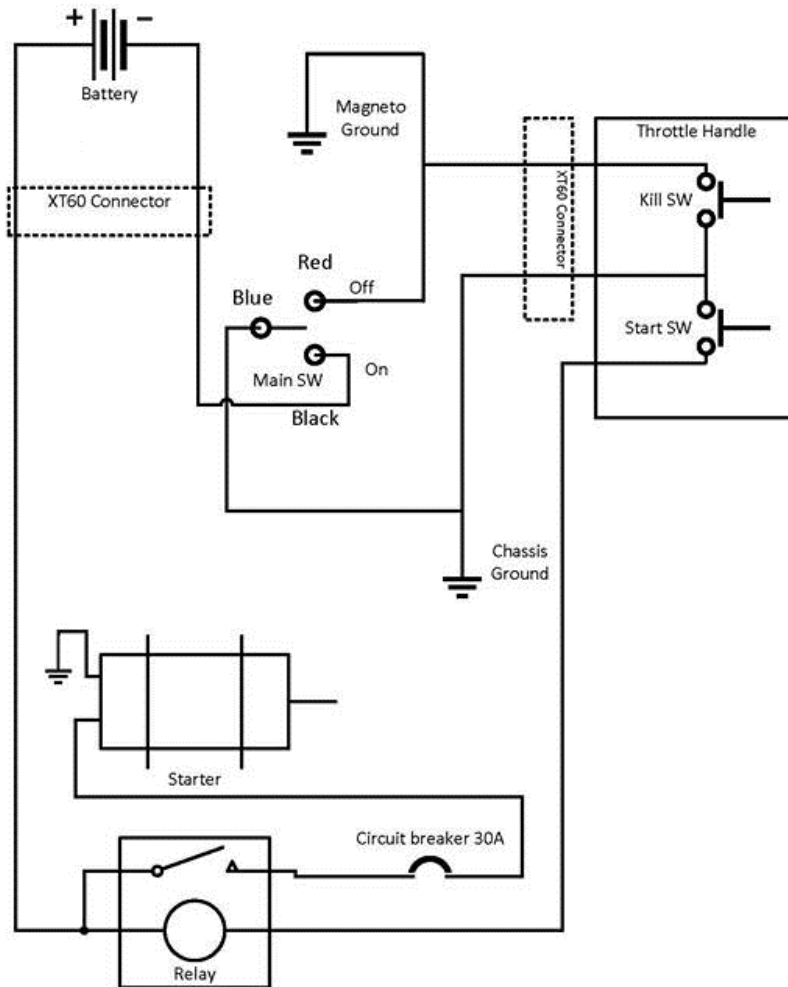
M8 Cylinder head nuts	23 Nm
M5 Crankcase screws	10 Nm
Spark-plug	26 Nm
M6 and M8 reduction screws	15 Nm
M5 reed valve body screws	4 Nm
M5 crankcase screws	10 Nm
M10 Crankshaft pulley nut	40 Nm
M5 Ignition coil screws	10 Nm
M5 Starter sprocket screws	10 Nm
M6 electric starter screws	13 Nm
M5 x 16 mm electric starter bracket screws M5 x 20 mm electric starter bracket screw	5 Nm 2 Nm
M5 Carburetor plastic connector screws	3 Nm
M6 Electravia carbon propeller screws	10 Nm

1 kg/m = 9.81 Nm

## 9. Technical specifications of Nitro & Tornado engine

Engine	Nitro 200	Tornado 280
<b>Engine type</b>	Two-stroke	Two-stroke
<b>Power</b>	28 Hp @ 7500 rpm	33 Hp @ 7500 rpm
<b>Capacity</b>	190 cc	268 cc
<b>Cooling</b>	Air cooled	Air cooled
<b>Cylinder bore diameter</b>	65 mm	73 mm
<b>Starter</b>	Manual or electric starter or dual start	Manual or electric starter or dual start
<b>Carburetor</b>	WB 37	WB 37
<b>Ignition type</b>	Inductive discharge	Inductive discharge
<b>Spark plug</b>	NGK (BR10ES) / DENSO (W31ESR-U) / DENSO (IW31)	NGK (BR10ES) / DENSO (W31ESR-U) / DENSO (IW31)
<b>Usable propellers</b>	125 cm to 150 cm Electravia 2 or 3 blades	125 cm to 150 cm Electravia 2 or 3 blades
<b>Max thrust at 7500 rpm</b>	68-75 kg	78-85 kg
<b>Gear ratio</b>	1:2,7	1:2,62
<b>Reduction</b>	Belt transmission	Belt transmission
<b>Power curve</b>	Tuned for 100 % linear throttle response.	Tuned for 100 % linear throttle response.
<b>Combustion at 5000 rpm</b>	3 - 3,5 l/h	4,5 - 5 l/h
<b>Fuel</b>	91 Octane minimum	91 Octane minimum

## 10. Electric scheme (e-start engine only)



## 11. Warranty and service

We are putting every effort in order to make our paramotors durable and reliable. However, being mechanical devices, they can sometimes have material and assembly defects which are independent of our production (the components from external suppliers).

Your invoice is the document confirming your warranty rights.

Air Conception grants 24-month warranty on new paramotors from the day of purchase as indicated in the invoice. Air Conception also grants a of 5 years warranty extension option for all American customers.

Warranty covers repair of damages caused by material and assembly defects, provided that the user acted according to our exploitation recommendations and inspection rules presented in the manual and presented in the course of the training. The inspections described in the manual during the warranty period are obligatory.

Every claim must be done to the authorized dealer or to the factory.

Only the costs of transport in connection with warranty interventions for the paramotor, engine or parts will be charged to the customer.

The warranty does not cover repairs after seizing the engine due to thermal reasons (mixture is too lean due to a number of reasons) or foreign matter getting inside.

The warranty also does not cover damage due to used of any propeller different than the Electravia recommended models.

The paramotor must be delivered to the service personally or by courier in a package preventing it from any transportation damage.

**Please empty the paramotor's fuel tank. Do not send the propeller, the propeller cage or any other additional elements unless they are directly connected to the repair carried out by the service.**

 **Attention! All extra processing and repairs of the paramotor, without prior agreement of the producer result in the immediate loss of warranty!!!**