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WORLDWIDE PARAGLIDING AND PARAMOTORING MAGAZINE. FOR FREE.

SMOKIN'!

Photo : Elina Sirparanta

ISSN 2267-

Portfolio – Practical information – Parabatix interview

SIGNS IN THE SKY

PARAMOTOR: SMOKING FOR ALL!

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Parabatix: Bringing paramotoring to the people… page 18

It is easier for paramotor pilots to draw nice lines in the sky than for paraglider pilots, parachutists or other flyers: Our motors can be easily converted to become smoke sources…

Photo : Elina Sirparanta

Photo : Elina Sirparanta

PORTFOLIO

THE SMOKE SHOW

During the last Parabatix event in Dubai, the paramotor pilots won over the public with their impressive acrobatics, leaving trails drawn in smoke across the sky.

Photo : Elina Sirparanta

Photo : Elina Sirparanta

WHITE SMOKE: HABEMUS PARAM...

Photo : Parabatix

PORTFOLIO

Photo : Elina Sirparanta

DARE TO SHOW YOUR CURVES

Photo : Elina Sirparanta

PORTFOLIO

RED BULL AIR RACE 2014, PUTRAJAYA, MALASIA

Photo : Akos Nemeth

Photo : Akos Nemeth

At the Red Bull Air Race, which took place in mid-May in Putrajaya, Malaysia, well known pilot Pal Takats left no doubt about his new position at Ozone. His paramotor is a Blackhawk Airmax 200 (http://blackhawkparamotor.com), with an HE 29HP engine. He also uses the Nirvana Sky Writer smoke system.

Photo : Predrag Vuckovic www.extreme-photographer.com

Photo : Predrag Vuckovic

PORTFOLIO

Photo : Geh Chee Minh

KANGOOK WEEK 2013, LAC-AUX-SABLES, QUEBEC, CANADA

KANGOOK
PARAMOTORS

NEW OUT

The Canadian manufacturer RSUltra has also added a smoke system to its product line.

It works in the same way as the Nirvana one. In its current version, assembly requires drilling and soldering the exhaust pipe, but the manufacturer will shortly be producing a simpler assembly option. A nice little feature in the RSUltra system is the use of a band of Velcro to attach the operating button to your finger.

For the liquid, RSUltra advises using a product such as Super-Dri Aviation Smoke Oil from the company Air Craft Spruce.

www.aircraftspruce.com/catalog/eppages/superdri.php

Price for the whole system: 150 euros.

http://www.rsultra.com

Photo : Parazoom

Free flying paramotor pilots turning above a castle in Italy. Photo: www.parazoom.de

GET YOURSELF SMOKING!

Drawing spectacular lines in the sky isn't the exclusive right of the Red Arrows. Here's a simple way for paramotor pilots to get smoking…

by Sascha Burkhardt
Translation by Ruth Jessop

One of the main reasons for using smoke during acrobatic demonstrations is to allow the spectators to visualize the trajectory of the aircraft more easily, especially during an acrobatic flight.

It was unsurprising that paramotoring professionals very quickly started to use smoke. All the more so because, in contrast to paragliders in an acro show, they already have a source of heat attached to their backs.

During an event like Parabatix, all the pilots use the smoke kit made by the Czech company Nirvana/Flystyle. Its managing director, Pavel Brezina, is always the first to set off clouds of smoke during every paramotor event he takes part in. Furthermore he is an integral part of the Parabatix team.

But it isn't just the pylon pros who use smoke: More and more amateur pilots are discovering the pleasure of slaloming between the clouds they've made themselves several seconds earlier.

Smoke has always been used to help the spectators at acrobatic flying festivals to follow the manoeuvres that have been performed.

Photo : Sascha Burkhardt

Photo : Sascha Burkhardt

One of the first events where the public could see the Parabatix races and the impressive trajectories made by the smoke: the Icarobatix race course at the Coupe Icare.

Make your own ephemeral smoke pylons

To make the smoke, the principal is always the same: All you need to do is to inject a suitable liquid into the exhaust pipe; paraffin, for example, gives white smoke. If the pilot wants to make other colours of smoke, for example by using a methylene blue powder, making the mixture is a bit more complicated and, in addition, it often results in the fuel tank and motor being coated in a pigment of the same colour. White smoke, is the easiest. The proof: An old car with a cracked cylinder head does the job nicely. All you need to do is inject some liquid coolant into the exhaust pipe to get thick smoke.

The Sky Writer kit from Nirvana is the simplest way to equip a paramotor and is the system used by all the pilots in the Parabatix competiton. It is made up of, amongst other things, a little plastic bottle in a neoprene case fixed onto the cage with Velcro bands. A battery powered electric pump, activated by a switch held in the pilot's hand, injects the liquid into the exhaust pipe. According to its specifications, the liquid made from different oils is neither harmful to our health nor the environment. www.nirvana.cz

One of the Fresh Breeze mechanics has equipped his trike as follows: He picked up a liquid screen wash reservoir plus pump at the scrap yard, pierced the exhaust pipe of his engine and, with a tube, linked it to the pump. A simple contact in the fuel handle operates the mechanism.

For this pilot mechanic, even the liquid for the smoke came from the car scrap yard, being recycled coolant liquid… Other pilots don't think twice about injecting diesel into their exhaust pipe, but that can result in a trail of flames coming out of the exhaust pipe rather than smoke.

In any case, if you are a handyman at heart, you'll easily find a way to add a smoke system for a basic investment of a couple of dozen euros and a monthly outlay of less than twenty euros.

THE READY MADE KIT

If you are ready to invest a bit more, Nirvana/Flystyle have designed a ready made kit, the same one that the Parabatix pilots use…
Nirvana also sells the oil ready to use. It is

Before take off, the pilot fills the bottle with some liquid which smells like vanilla. You need to learn to manage your consumption: A full tank doesn't even last five minutes…

Photos : Sascha Burkhardt

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a mixture especially made for Nirvana, by a company which also supplies professional aeroplane acrobatic teams. A one litre bottle costs nearly five euros and will be empty in less than five minutes of flying with a continuous smoke trail.

It's expensive, but the mixture is efficient. In addition, it leaves a smell of vanilla perfume in the air. It isn't perhaps to everyone's taste, but it helps dispel negative images of smoking flying machines which smell bad. This smoke system costs about 145 euros but you can put it together in about an hour, so it saves lots of time. The most difficult part is taking the irreversible step of putting together the injection pipe: You need to put a hole in the exhaust pipe so that you can fit the captive nut into which you screw the nozzle.

To rivet the captive nut in place, with its

The smoke allows the trajectory of the paramotor pilots to be seen perfectly, no matter how tortuous…

Photo : Niviuk

Photos : VBurkhardt

specialised internal thread, you will need special pliers, but if you ask your local garage to do it for you after making the hole, it will only take a couple of minutes.

If you don't buy the system with the nozzle included, you could make it yourself instead by drilling the length of an 8mm bolt with a 0.5 to 2 mm drill-bit, for example. As in the ready made kit, you screw it into a threaded rivet into the exhaust.

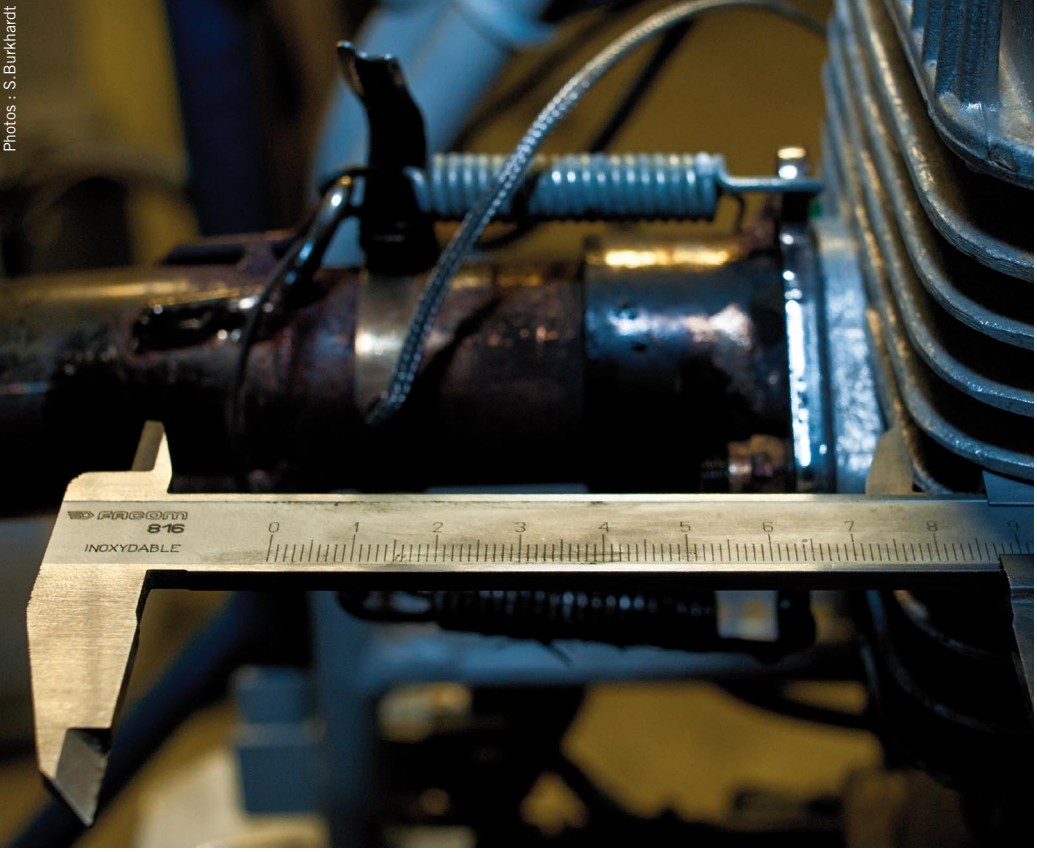
The nozzle needs to be put near the cylinder: In the kit from Nirvana, the manufacturer recommends installing it about ten centimetres from the exhaust manifold of the cylinder. Further away, the production of the smoke will be less efficient. Nearer increases the risk of flooding the motor at low speeds as the oil could flow back into the cylinder. But this latter problem can also happen if it is further away – depending on the type of motor and the location of the pipe, it is best not to produce smoke when slowing down.

HOW TO USE IT

Using it is very simple: press on the little hand held button, and the smoke will come out of the exhaust with a barely noticeable delay. But learn to measure out your smoke production. Otherwise, in less than five minutes, the reservoir of smoke oil will be empty. Also, if you fly at an aerodrome, don't forget to warn the manager of the airstrip or tower: On one occasion we know of, they were about to call the fire brigade believing there to be an aircraft on fire...

A great game, even without spectators: create your own virtual pylons with smoke to fly around...

Photos : S.Burkhardt



HOW TO SET UP THE SKY WRITER SYSTEM IN DETAIL...

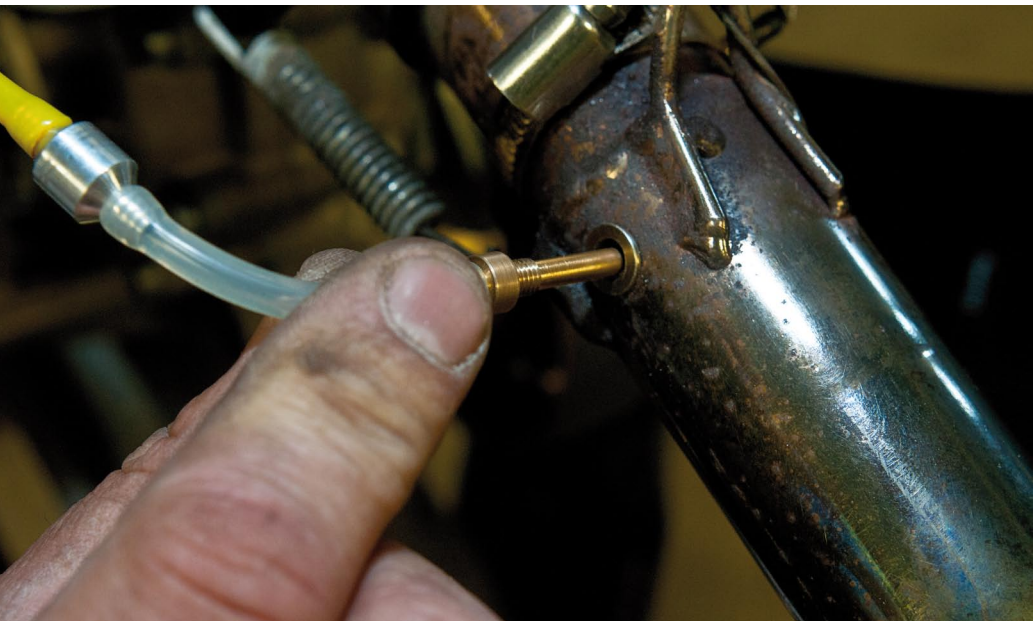
The ideal place to fix the nozzle to the exhaust pipe is ten centimetres away from the cylinder.

It's essential, no matter how upsetting to the owner, to drill a hole in the exhaust pipe. It is preferable to drill a small pilot hole, for example with a 2 mm drill bit, and then make it bigger with a drill bit of the correct size.

A captive nut comes with the system: Essentially, it is an internally threaded rivet.

Cheap riveting pliers won't be any use, you will need top quality ones. Your local garage should be able to help you with this little job.

The hole fitted with its captive nut. If you remove the system for one reason or another, you can block up this opening by screwing a little bolt into it.



The nozzle is screwed into place. Be careful: The thread of the nozzle is rather fragile and mustn't be tightened up too much. At the same time, if the nozzle comes undone, there is a risk that it could end up in the propeller. You therefore need to secure it by fixing the pipe to the chassis of the motor with the help of a cable tie, in such a way that it is too short to be within range of the propeller, but long enough not to be under tensi-on, even if the motor moves due to vibration.

PARABATIX

The Parabatix races are very spectacular events which bring our sport of paramotoring to the heart of the world on the ground: In towns like Dubai for example, the public have been amazed to discover that paramotoring is a sport that's fun, modern, acrobatic, the best…

INTERVIEW WITH ONE OF IT'S FATHERS PASCAL CAMPBELL-JONES

free.aero : Pascal, how long has the Parabatix competition been running and what is its aim?

Pascal Campbell-Jones : With Mathieu Rouanet and the late Julius Gee, we have worked since 2006 on the project. The first official competition took place in 2010. Our goal was to create a new type of event, capable of introducing paramotoring to as big an audience as possible, to show that there are differences between paragliding and paramotoring, to support pilots and professional teams and to offer a top quality flying show. Over the last few years we've discovered how flexible the event and the organizers can be, and this has opened the door to unexpected opportunities, such as being able to organize this type of race event in the heart of a big city. When the first contact that a member of the public has with a paramotor is at a Parabatix competition, it is the best publicity for our sport that one can possibly imagine. The proof is that, after we've held an event, the local schools report an increase in the number of students and in certain regions, new schools have even started up.

Pascal Campbell-Jones, the father of Parabatix.

Acrobatics and breath taking maneuvers are no longer the prerogative of a few free fliers. Parabatix clearly shows this.

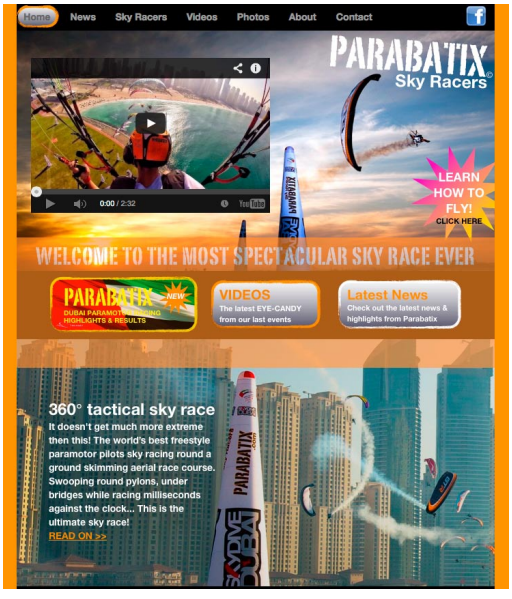
free.aero : Parabatix and Paramania, is it the same thing?

Pascal Campbell Jones : Absolutely not. Even if I'm involved in both, they are two clearly separate activities. These races are a great way to highlight our sport and to find new followers – it's in the interests of all the manufacturers.

free.aero : What's the next stage?

Pascal Campbell Jones :
We're working on the Parabatix World Tour. We are starting to work with marketing agents from big companies who are active in the general public sector, outside our little world. We can offer them an impressive audience: Our last video on YouTube was viewed more than a million times. The next production will have viewing figures of a similar magnitude. The companies therefore get visibility similar to a television advert – for a much smaller price. And paramotoring gets even more new followers... ■

The video which got more than a million hits: Paramotor Sky Racers Parabatix 2012
http://www.youtube.com/watch?v=IG0wyXUcqZI



For more information on "Parabatix Sky Racers"
www.parabatix.com

Photo : Elina Sirparanta

Parabatix brings paramotor action to the heart of the cities: The best way to interest the non flying public in our sport.

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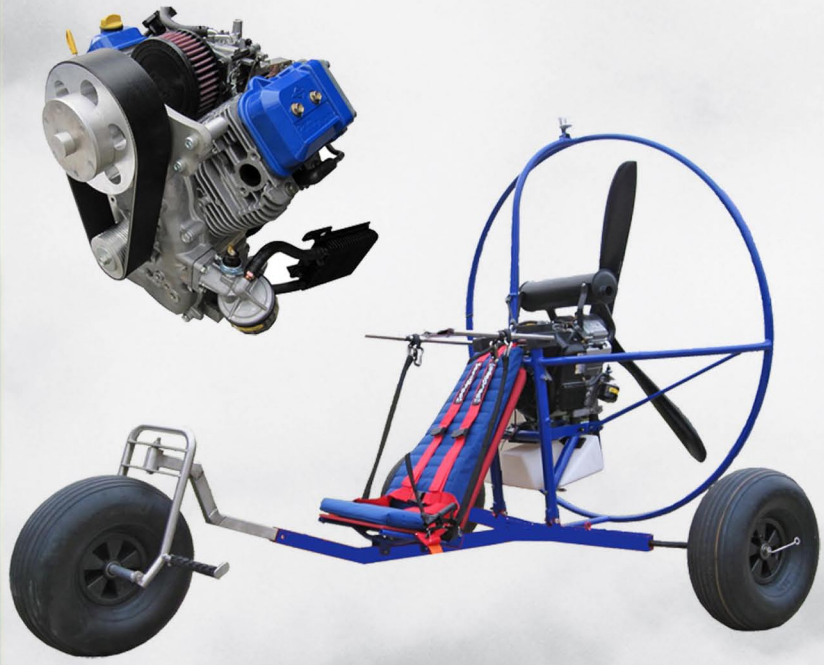

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Photo : Parabatix

Parabatix brings paramotor action to the heart of the cities: The best way to interest the non flying public in our sport.

Photo : Elina Sirparanta

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