

WELCOME TO PARAJET

INTRODUCING THE MAVERICK

From a small hotbed of innovation in Dorset to the snowy peaks of Everest. From pioneering journeys in far flung corners of the world, to you and your next adventure. Now you're a Parajet pilot, the sky is your playground - we hope you enjoy it as much as we do.





LET'S GET TO THE IMPORTANT STUFF FIRST

WARNING: Parajet recognise that there are risks inherent in flying a paramotor. By his or her purchase and use of this product the pilot recognises and accepts these risks.

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DISCLAIMER While the Information contained in this manual has been presented with all due care and is considered to be true and correct at the date of publication, changes in circumstances after the time of publication may impact on the accuracy of the Information. The information may change without notice and Parajet is not in any way liable for the accuracy of any information printed or in any way interpreted and used by a user.

PROTECT YOUR WARRANTY Carefully read, follow and understand the instructions given in this user manual. Failure to do so will void your products warranty. This user manual is

an essential part of the product, and you should keep it in a safe place for future reference. Parajet are always here to help our pilots but cannot be held responsible for component failure or damage due to active negligence or insufficient understanding of the products user manual.

KEEP IT FLYING FOR LONGER The lifespan of your paramotor depends on many factors. Flying conditions, impacts, improper use or harsh use can all affect its function. Some parts are also subject to wear over time. But you will get always more fun and many more years out of your paramotor if you treat it with care.

Inspect your paramotor for signs of fatigue or wear before and after every flight. We strongly recommend a full Hub-to-Harness inspection which can be found at the back of this user manual. If the inspection reveals any problem, no matter how small, DO NOT fly Maverick until a repair has been carried out.

PARAJET SAFETY GUIDELINES

- » Do not fly your Mayerick without adequate training gained from a certified school or instructor. Find your nearest paramotor training school on our website: www.parajet.com/flight-school-locator/
- » Never modify your Mayerick paramotor or any of its parts. This invalidates your warranty.
- » Parts that are damaged must be replaced immediately with genuine Parajet or Vittorazi parts. If in doubt contact us.
- » Parajet recommend you fly with a reserve at all times. You must wear a properly fitted and fastened helmet and solid footwear with good ankle support.
- » Make it a habit to check your Maverick paramotor before and after every flight. Get to know the **HARNESS TO HUB** check list at the back of this manual.
- » Before starting your engine always check that the propeller is clear from any clothing, lines, ropes or anything that could get caught in moving parts. The spinning propeller can cause serious damage and injury, ALWAYS stay well clear.

- * Before starting your engine **ALWAYS** warn people in the immediate area and make sure they are at a safe distance. Make it a habit to shout "Clear Prop" in a loud and clear voice. **NEVER** start your engine indoors or in a poorly ventilated area, and ALWAYS start the engine with the paramotor on your back!!
- * After a flight your engine and exhaust will be hot; stay clear until cooled.
- * Before launching your Maverick check harness and helmet buckles are properly fastened. Ensure your paraglider is attached correctly and all karabiners are properly fastened.
- * Do not fly at low-level over water or woodland or potentially dangerous landing areas. Do not fly into controlled airspace or over built up areas. ALWAYS consider your safe landing area should you get into difficulty. NEVER fly at night.
- * ALWAYS watch the weather because conditions can change rapidly. NEVER fly if large cumulus clouds are forming and **NEVER** fly in the rain.
- * To get the most fun out of your Maverick paramotor ALWAYS fly within your skill level and known limits.



AIRFRAME & ENGINE

TOP SPARS (X2)





MAVERICK NET & BAG

PROPELLER (X2 HALVES)

NOTE: Images are for illustrative purposes only and does not acurately represent what may appear in the Maverick box

WHAT IS IN THE BOX





CAGE SPARS (X2)

CAGE SECTIONS (X4)





PARAJET TOOL KIT

PARAJET T-SHIRT

Pilots Manual for Parajet Maverick Paramotor – © 2021 Gilo Adventure Sports



BUILD MY MAVERICK CAGE ASSEMBLY

Your Maverick is shipped ninety percent factory-assembled. To complete your setup, you only need to assemble the cage and fit your propeller. Once done and you're confident that you understand the safety guidelines; you're ready to fly...

Attach a curved cage section. There are four identical cage sections meaning you can start with any one of them. Begin at the bottom of the airframe and attach the first cage section.

Attach a cage spar. There are two identical cage spars so either one will work. Attach your cage spar to the harness swan arm and then connect the T-shaped end to the cage section you just fitted. Work symmetrically by repeating steps one and two on the opposite side of the Maverick airframe.



5 Attach another cage section and connect this with the corresponding top spar you just fitted. Repeat on the opposite side of the airframe.





4 Attach both top spars ensuring the button connectors click securely into position. Do not join them together at the top.



6 Lastly, bring the whole top of the outer cage together by joining the two top spars.







BUILD MY MAVERICK **ATTACH NET & REMOVAL**

Unpack and gently uncoil the Maverick net, making sure you don't fold or crease the tubing. The tubing will be pressed into place around the outside of the whole cage. The net should only go on the harness side of the cage, not the engine side.

Rest net over the outer cage and start at the bottom by locating the connector pin. Once you have linked pin and tube simply press the net into position around the whole outer cage and link up with the opposite connector pin.

Tension your net using the Boa Closure System on either end of the tension cord. Pass a wire loop over a tension pin as per diagram. Slowly tight-en up the system, aid the ratchet along by pushing in on the ratchet's mounting plate whilst tightening. Repeat evenly on the other side. Do not over-tighten.

To Remove the net is a reverse process. Start by loosening the Boa Closure System and then unhook the wire loop. Repeat on both sides of the Net.



✓ Holding everything together place into the bag. Keep holding untill the zip is almost closed. Give the bag a shake and the net will grow to the perfect fit.





To pack the net into its bag, carefully make a coil with the Let tube, slightly smaller than your bag. Do not kink or fold because you will deform the tube and that's not pretty.



BUILD MY MAVERICK ATTACH THE PULL-START

WARNING: When fitting the pull-start to your Maverick paramotor, always attach the pull-start pulley before you attach the propeller to the prop hub. This will avoid injury should you accidently start the engine.

Always attach the pull-start before you attach the propeller. Find the pulley wheel (on the pull-start line) and attach to the cage by pushing in the button on the corresponding top spar.



2 Pull out some pull-start line and pinch the hand loop through a gap in the net that allows clean pulling. Double check the line is running clearly and not catching anything.



BUILD MY MAVERICK FIT THE PROPELLER

1 Lay your two propeller blades on the ground with the 'Parajet' stickers facing upwards. Slide the two propeller blades together ensuring the mounting holes align perfectly.





3 Place a spring washer and standard washer onto each propeller bolt. Pick up the propeller holding it tightly, keeping everything together with your hands, then align the propeller bolts to the mounting holes on the prop hub.

2 Insert your six propeller bolts into the propeller plate. Align bolts with mounting holes and insert into the propeller. If required, make sure the Vittorazi spacer is fitted behind your propeller.



Use the Allen Key that came with your Maverick tool kit and fit your propeller tightening the bolts in a diagonal pattern slowly and evenly across the hub. Tighten to 8Nm.

WEIGHT-SHIFT FITTING THE OFFSET BLOCKS

PILOT WEIGHT **OFFSET FITMENT GUIDE**

WARNING: While we have endeavoured to provide concise and accurate instructions for harness adjustment, we recommend that these be tested before your first flight by hanging in a simulator with the aid of a qualified paramotor instructor.

To achieve the best flying characteristics of the harness it is important that you spend time to fully understand the adjustment system and set it up for your optimum weight setting. Failure to do this accurately will result in poor handling, an uncomfortable flying experience and could lead to a potentially hazardous accident.

Weight-shift enables you to exhibit the agile qualities of freeflight with maneuverability so precise the paramotor feels like an extension of your body.

The harness should be adjusted to suit both your physique and flying style. It is important to adjust it correctly to ensure you can easily slide into the sitting position after take-off.

Due to the dynamic nature of the harness, additional fine-tuning of adjustments maybe required during your first few flights to ensure optimum comfort.

The paramotor harness is shipped with the offset blocks already attached to the swan neck arms. Always ensure the blocks are installed on the correct side of the swan neck arm for your engine.

To adjust the offset blocks, unfasten the 8mm attachment bolts from the swan neck arm.

- Contract arm based on your weight range (see guide opposite).
- Secure the offset block in place using the attachment bolts, tightened to 20 Nm.



WARNING: The following pilot weight offset fitment guide is for an initial reference point only. We strongly recommend that these be tested before your first flight by hanging in a simulator with the aid of a qualified paramotor instructor. Additional fine-tuning maybe required during your first few flights to ensure optimum comfort.





PARAJET HARNESS ADJUSTMENT GUIDE

It is important to adjust the harness correctly to ensure you can easily slide into the sitting position after take-off. Before making any adjustments, loosen all straps and webbing.

LEG STRAPS Correctly adjusted leg straps help the seatboard deploy correctly once airborne, without using hands. In the standing position, use the quick-release buckle to secure each strap around the thigh. Symmetrically adjust leg straps using the handle loops so that they fit comfortably without being tight. You should be able to slide hand between thigh and strap – no more.

WAIST STRAP Your waist strap adjusts to give you a variable level of movement within the harness. The waist strap can also be adjusted in flight to suit the conditions; for example, it could be tightened in turbulent air and loosened during smoother conditions to allow for easier weight shift.

CHEST STRAP Your chest strap can be moved up and down the shoulder straps. Adjust the position to fit across the upper part of your chest. Then fasten the quick-release buckle and adjust the total length to take lateral tension off the shoulders. **SHOULDER STRAPS** Stand upright with the chest and leg straps fastened and symmetrically adjust the shoulder straps using the handle loops until the straps are a snug fit. To check correct adjustment squat down into the harness, the seatboard should deploy automatically.

LATERAL COMFORT STRAPS Your lateral straps stabilise the weight of the paramotor when not in a seated position. Symmetrically adjust the comfort straps using the handle loops until your paramotor rests comfortably on your torso.

SEATBOARD STRAPS The seatboard straps change the depth of the seat. Adjust to find a comfortable position. Lengthening the straps helps you to slide easily into the harness for take-off and landing. Shortening the straps supports your legs in flight.

ADJUSTING THE CARBURETTOR SETTINGS

WARNING: It is important to thoroughly read and understand the carburettor settings and adjustment, as outlined in the engine manufacturer's user manual. Failure to understand these procedures may lead to incorrect or dangerous settings and can cause irreparable engine damage and invalidates the engine and paramotor warranty.

HEALTH CHECK Your spark plug can be very helpful when assessing whether your engine is correctly tuned. When removed and checked, a correctly tuned engine will produce a sandy brown or tan coloured spark plug. A spark plug that comes out grey or white indicates a 'lean' fuel mix (bad), while a spark plug that comes out black, wet or sooty indicates a 'rich' (ok) or flooding situation.

FACTORY SETTINGS Your engine is shipped with the carburettor set to a default factory setting suitable for general use, and will ensure plenty of fuel is entering the engine. If your engine is performing well under this setting, then it is possible you will not need to make adjustments.

However, your carburettor can be affected by the weather, altitude and climate, so you may need to adjust it in order to keep your engine running smoothly. At high altitude your engine will run 'richer' and lose perfomance. If you adjust to compensate it is important to return settings when back to lower altitude. **VERIFY SETTINGS** Before making any changes, first make sure your engine is properly up to temperature. To verify factory settings simply close the High and Low jet screws until gently seated and then open according to the factory setting. Do not over tighten as this will damage the needle seat. Once settings are established check the correct carburation following these steps:

- » Check motor can maintain a constant idle speed 2k-2.2k RPM.
- » When applying throttle quickly the rpm should quickly increase without hesitation.
- » Test RPM at a mid-throttle setting, check power does not fluctuate or hiccup.
- » Full throttle should achieve 8k-8.6k RPM.

After flight, a check of the spark plug colour can confirm settings are correct (light brown electrode).

WARNING: It is important to thoroughly read and understand the carburettor settings and adjustment, as outlined in the engine manufacturer's user manual. Failure to understand these procedures may lead to incorrect or dangerous settings and can cause irreparable engine damage and invalidates the engine and paramotor warranty.

LEAN OR RICH Should the engine not be reaching full power and you find the spark plug colour black, then it is necessary to 'lean' the mixture by closing the jet screws no more than oneeighth of a turn. Should you find the spark plug to be grey or white in colour it is very important not to continue flying. Make an adjustment to 'richen' the mixture by opening the mixture screws to achieve the correct light brown colour.

The Low needle mostly trims idle mixture but does affect midrange mixture. The High needle trims mixture at mid-range through full power. Unscrewing the needles increases fuel flow which richens the fuel/air mixture. Screwing-in reduces fuel flow which leans the fuel/air mixture. Do not confuse fuel/air mixture with fuel/oil mixture, which refers to how much oil gets poured into each litre of petrol.

MOSTER 185 CARBURETTOR





ATOM 80 MY'19 CARBURETTOR [WG8]



UNDERSTANDING NEEDLE ADJUSTMENT: Imagine that the head of the needle valve - the part that looks like a screw head - is a clock face. That screw head gives you sixty [60] minutes (one [1] hour) per one [1] complete turn. When tuning, turn the needles in one-minute increments. Always tune from the fully closed position of the needle.

ATOM 80 MY'20 CARBURETTOR [WB3A]

- 1) Throttle Lever
- 2) Fuel Inlet
- 3) Primer
- 4) High Speed Adj. (H)
- 5) Low Speed Adj. (L)
- 6) Idle Screw
- 7) Vacuum hose

	Settings
Low Screw Turn	22 to 25 mins
High Screw Turn	60 mins
Idle RPM	2000



RECOMMENDED FUEL & MIXING PROCEDURE

Your Maverick is powered by a 2-stroke combustion engine that requires a mixture of unleaded petrol and engine oil. The quality of the petrol and oil is extremely important to the running, efficiency and life of the engine.

THE RIGHT FUEL When choosing a petrol to use, don't go with the cheap stuff. Always use a highquality unleaded petrol with a RON octane rating of 92, a MON octane rating of 87 or a AKI (RON+MON)/2 octane rating of 91, or higher. Fuel with a lower octane rating may increase engine temperatures, resulting in the risk of piston seizure and damage to the engine.

RECOMMENDED OIL We also recommend that you use a high-quality fully synthetic 2-stroke oil, which is designed to deliver the highest levels of engine protection. Parajet and Vittorazi recommend the use of Motul 800 2T Factory Line Off Road 100% synthetic oil. Ensure the oil you choose meets the standards API TC or JASO FD/FC.

WARNING: Fuel is extremely flammable and highly explosive under certain conditions. Always work in a well ventilated area. Do not smoke or allow open flames or sparks in the vicinity.

FUEL MIXING Knowing the proper way to mix your fuel is the first step in keeping your Maverick running strong and long. This chart provides an easy to use reference for getting the fuel to oil ratio correct for your Vittorazi engine using Motul 800. Please refer to Vittorazi for correct ratios for other brands/grades of oil.

	Break-in	Regular Use	
Motul 800	0-15 litres	15+ litres	
Moster 185	2% Oil or 50:1 Eg. 100ml Oil : 5Ltr Fuel	1.5% Oil or 66:1 Eg. 75ml Oil : 5Ltr Fuel	
Atom 80	2% Oil or 50:1 Eg. 100ml Oil : 5Ltr Fuel	1.5% Oil or 66:1 Eg. 75ml Oil : 5Ltr Fuel	

GETTING INTO YOUR PARAMOTOR HARNESS

Before getting into the harness, attach hand control to the swan neck arm, loosen the shoulder straps and ensure leg, waist and chest buckles are unfastened. Ensure straps are untangled and positioned to aid you in locating them once in the harness.

2 Drop onto your knees with the harness behind you. Shuffle backwards until the seatboard is pressed against your upper legs.

3 Fasten both leg straps using the quick-release buckles. Slip both arms into the shoulder straps before fasthening the waist and chest straps.

4 Lean forward onto both hands. Bring your left knee to your chest so that your foot is flat on the ground. Repeat the same with the right foot, using your hands to steady yourself.

5 Keeping your body tight, straighten yourself upright while driving through your heels, keep the balls of your feet on the ground as well, until you are in the standing position.



6 Tighten the shoulder straps using the handle loops until the straps are a snug fit, but not over tight. To confirm correct adjustment squat down into the harness - the seatboard should deploy automatically.

7 Before starting the engine, always carry out the Six Point Check ensuring your harness and helmet buckles are fastened and secure. Also ensure that the paraglider is clipped-in correctly and that the karabiners are fastened securely.

MAVERICK PARAMOTOR **STARTING YOUR ENGINE**

PRIMING THE ENGINE For the first start, the engine needs the fuel system primed. This is carried out during your setup.

Push in the Priming Spring Button located on the carb and squeeze the Priming Bulb to pull the fuel into the system.

2 Stop immediately when you see the fuel reach the carburettor inlet. Failure to stop will flood your engine

3 Squeeze the Priming Bulb one final time to let a small amount of fuel into the carburettor.

STARTING THE ENGINE Remember to warn anybody nearby and shout 'Clear Prop' in a loud and clear voice – even if nobody is there.



With the paramotor securely fitted on your back, attach your Hand Control to your right or left hand using the velcro strap. Check your immediate area in a 360 degree arc to make sure any other people are at a safe distance.

2 With your thumb lightly covering the kill switch, take the pull-start handle in your hand. Pull the starter cord outwards very gently until you feel starter engage. Shout 'Clear Prop' in a loud and clear voice, then pull downward quickly and firmly (50-60cm). Repeat process until engine starts.

STOPPING THE ENGINE Allow your engine to idle for 60 seconds without applying any throttle. Shut off the engine by holding down the kill switch on your hand control until the engine has completely stopped.

RUNNING THE ENGINE WARM UP PROCEDURE

WARNING: We recommend that you do not run your Maverick paramotor while placed on the ground. Experience has proven that it is much safer to carry out all pre-flight power checks with the paramotor firmly strapped on your back.

Run up your Maverick paramotor as instructed below to ensure that the engine and transmission are warmed up correctly and to ensure continuous reliability in the future. Be sure to choose a flat area of ground which is well ventilated. Do not start the engine indoors or in other poorly ventilated areas.

Unfasten the hand control from the pivot arm and attach it to your right hand using the velcro strap.

2 Check your immediate area in a 360 degree arc to make sure any persons are at a safe distance. Always warn any persons nearby before starting the engine; Make it a habit to shout 'Clear Prop' in a loud and clear voice. **3** Making sure your thumb is lightly covering the kill switch, start the engine using the pull-start handle or by pressing the start button if your engine is fitted with an electric starter. Allow the engine run on idle for a couple of minutes without applying any throttle.





Place a foot out in front of you to brace yourself against while gently accelerating and with varying power output intensity. Run the engine in this way for five minutes to ensure the engine reaches optimum operating temperature.



VITTORAZI MOTORS MAINTENANCE SCHEDULE



	BEFORE & AFTER USE	EVERY 25 HOURS	EVERY 100 HOURS
Breakups, leak of oil, worn out parts	Checkup		
Screws and nuts	Checkup		
Sliding throttle	Checkup		
Killing off button	Checkup		
Engine idle	Checkup		
Rubber mountings	Checkup		To 100 hours or 1 year, replace
Carburation by the spark-plug colour	Checkup after every flight		
Carburetor		Checkup and cleaning	
Carburetor membranes		Checkup	To 100 hours or 1 year, replace
Air-box		Checkup and cleaning	
Air-box manifold			To 100 hours or 1 year, replace
Pull starter system		Gen checkup: rope, toothed wheel, springs & hooks	Toothed wheel. Rope and hooks or new starter complete
Reed valve		Checkup	Replace
Soundproofing material silencer		Optional Replacement	Replacement necessary
Spark Plug	Checkup after every flight	Replacement	
Gaskets			Replacement

	BEFORE & AFTER USE	EVERY 25 HOURS	EVERY 100 HOURS
Piston rings			Replacement
Piston			Cleaning soot and measure. Replacement after 200 hrs
Piston roller bearing			Replacement
O-ring head			Replacement
Head and cylinder			Clean soot from head. Measure cylinder. Clean exhaust port, decompressor hole
Oilseal carter case			Replacement
Bearing crankshaft			To 200 hrs replacement
Crankshaft			To 200 hrs measure. Roller bearing replacement
Reduction bearing			Replacement

VITTORAZI MOSTER 185 PLUS

Belt	Cleaning and tension	Replacement
Centrifugal clutch		To 150 hrs replacement
Reduction pinion bearing		Replacement

VITTORAZI ATOM 80

Clutch	
Gearbox oil	

	After 200 hrs replacement
First 25 hrs replacement	Every 50 hrs replacement

ENGINE TOROUE SETTINGS

Cylinder head nuts	16-17 Nm
Flywheel nuts	42-45 Nm
Pinion nuts	42-45 Nm
Crankcase screws	10 Nm
Spark-plug	25 Nm
Cylinder studs	20 Nm
Exhaust studs	25 Nm
Exhaust nuts	32 Nm
Engine support screws	15 Nm
Screws or nuts of 4mm	2.5-3 Nm
Screws or nuts of 5mm	6-6.5 Nm
Screws or nuts of 6mm	9-10 Nm
Screws or nuts of 8mm	25-27 Nm
Carburetor flange screws	10 Nm
Carburetor plastic connector screws	0.5-0.6 Nm
Carbon propeller screws of 6mms	8 Nm

PRE & POST FLIGHT SAFETY **PARAJET 'HARNESS TO HUB' CHECKLIST**

IMPORTANT: For reason of safety it is imperative to carry out a thorough check of your equipment both before and after EVERY flight. The 'Harness to Hub' Checklist should only take ten minutes to complete. These checks will help you familiarise yourself with your paramotor and enable you to identify wear and tear or any potential mechanical problems while safely on the ground. Should any issues occur during your safety checks DO NOT start the engine or attempt to fly your paramotor until you have had the chance to make adequate repairs or fit replacement parts.

1. HARNESS



1 Kg/m=9.81 Nmv

2. AIRFRAME

Check cage connections fit correctly and are secure.

Check netting is tensioned correctly and free from wear or
damage.

Check the hinge blocks, pivot arms and offsets are secure
and free from wear or damage.

Check for excessive lateral movement of the pivot arms. Small amount of movement is acceptable.

3. FUEL SYSTEM

- Check tank attachment and fuel line connectors are secure.
- Check primer bulb and fuel lines are in good condition over time fuel lines go hard, crack and let air in.
- Check the fuel pickup pipe reaches the bottom of the tank.
- Check the tank and lines for fuel leaks or spillages.
- Ensure adequate fuel for the planned flight duration.

MAVERICK PARAMOTOR SERVICE LOG BOOK

4. HAND CONTROL & THROTTLE

- Check throttle trigger operates smoothly when depressing and releasing.
- Check throttle cable is free from twists and clear from wear or damage.
- Check the throttle arm, located on the carburettor, operates smoothly with a full range of movement from the idle pin through to the throttle stop.

5. PULL STARTER (IF APPLICABLE)

- Check pull cord is correctly mounted to the top spar. The pull-start handle should face towards the harness.
- Check pull cord for wear or damage.
- Check there is good compression by pulling gently on the pull-start handle. You should feel some resistance.

6. ENGINE

- Check spark plug cap is secure and has a tight seal.
- Check carburettor for any signs of fuel leaks.
- Check air filter is securely mounted to the carburettor and chassis.

- Check the cylinder head for signs of oil leaks and ensure crankcase bolts are tight.
- Check engine mounts are secure and free from wear or damage.
- Check all nuts, bolts and springs on the exhaust system are secure and that the exhaust is free from wear or damage.
- Check the exhaust silencer is clean and not coked.

7. HUB & PROPELLER

- Check the hub is fully engaged with the spline and the central hub bolt is secure. Ensure hub is free from wear or damage
- Check the propeller is fitted correctly. The propeller stickers should face toward the rear of the paramotor. Ensure the leading edge and tips are clean and free from wear or damage.
- Check propeller plate is mounted correctly and that the properller bolts are secure.
- Check for adequate clearnace between the propeller and outer cage ring.
- Check for excessive movement in the propeller bearings. A small amount of movement is acceptable.

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