Concerning the Mantra M7

# *IMPORTANT NOTICE*

After investigation of the Mantra M7 leading edge lower surface deformation, we now have a clear understanding of the phenomenon.

Under certain specific circumstances the leading edge plastic reinforcements may remain inverted on the lower surface, even during flight. This is created by a lack of tension in the middle part of the leading edge during the inflation process. If the wing tips are allowed to inflate before the middle section of the wing, the plastics in the centre may become inverted and can remain so even once in the air. When it occurs, it normally only affects the central part of the wing span and whether it occurs at all depends entirely on how the wing inflates.

This situation can be avoided with good inflation practices. Always ensure the wing is in a good position before inflation. When launching in wind, make sure the wall is well built with the middle section higher than the tips. In nil-wind conditions, lay the wing in a pronounced arc so the middle is more likely to rise before the tips. We recommend to only hold the central A risers during the inflation process - there is no need to hold the outer riser to which AR3 is attached. Whatever the wind conditions or launch method you use, always ensure the middle of the wing inflates first, like this the phenomenon should not occur.

If you do find yourself in the air with inverted plastics, do not worry; the wing can be flown as normal. Our testing has shown it is not a safety concern, the wing can be flown perfectly safely and can always be remedied in-flight. To do so, use a short, sharp symmetric jab of the brakes. The action is not the same as the input used to recover from a collapse - a deep long pump is generally not effective - rather, use a shorter, sharper, harder input to provoke the plastics to right themselves. When jabbing the brakes like this, push your hands to the outside, that way the central brakes are engaged early, this is the most efficient technique to encourage the plastics to pop in the very middle of the wing. When using this method, we have found the plastics can be righted 100% of the time, we have never been unable to right inverted plastics whilst in the air.

We have conducted a thorough flight test procedure with the plastics inverted and have not experienced any significant detrimental effects to the behaviour of the wing. Parachutal stalls are unaffected, the wing enters and exits a parachutal stall in the same way whether with the plastics inverted or correctly orientated. Collapse recovery is also unaffected.

Theoretically, with the plastics inverted we believe there will be a slight impact on performance so you should input the wing as soon as it is safe to do so (when tow launching wait until you have released). However even with the plastics inverted, the M7 can be thermalled and ridge soared as normal and when flown actively can still remain open in strong turbulent air.

Please watch the video for a clear visual explanation and if you have any questions do not hesitate to contact one of the Ozone test team.