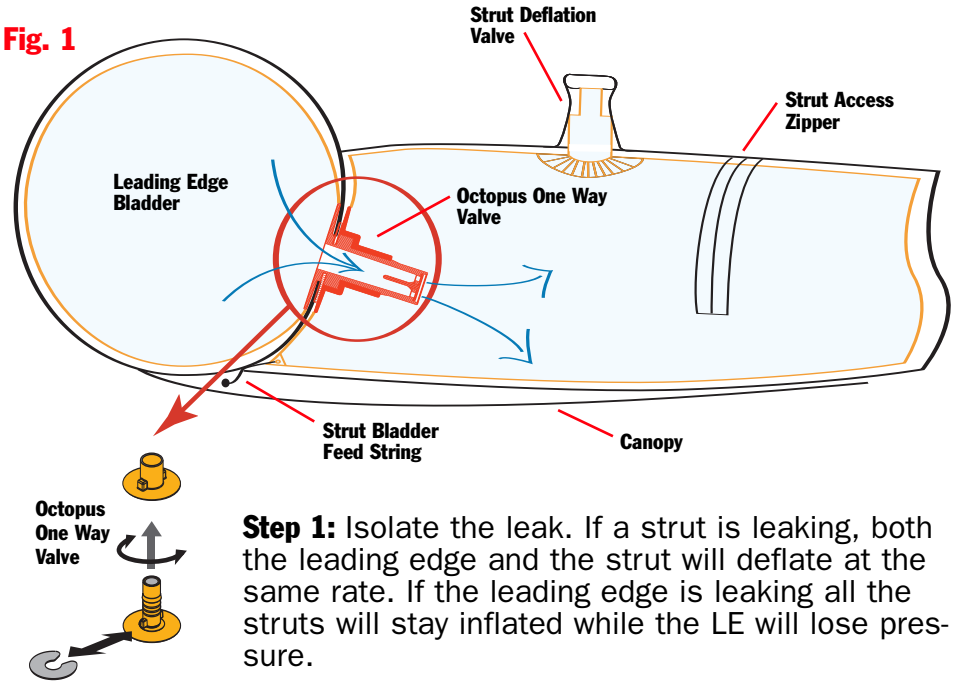
NAISH

Octopus Technology Guide

Octopus Quick Start Guide

What to do if your kite has a leak

Fig. 1



Step 1: Isolate the leak. If a strut is leaking, both the leading edge and the strut will deflate at the same rate. If the leading edge is leaking all the struts will stay inflated while the LE will lose pressure.

Step 2: Fully deflate the kite by opening all valves.

Step 3: Remove the appropriate strut bladder. To do this, disconnect the strut from the LE by reaching inside the strut and grabbing the Octopus valve. To disconnect pull and twist at the same time. See Figure 3 and refer to instructions on page 11.

Step 4: Remove the strut bladder. Don't forget to tie a monofilament line to the Strut Bladder Feed String shown in Figure 1 to help you re-insert the bladder after repair.

Step 5: Follow instructions from pages 13-15 for finding leaks.

Fig. 2

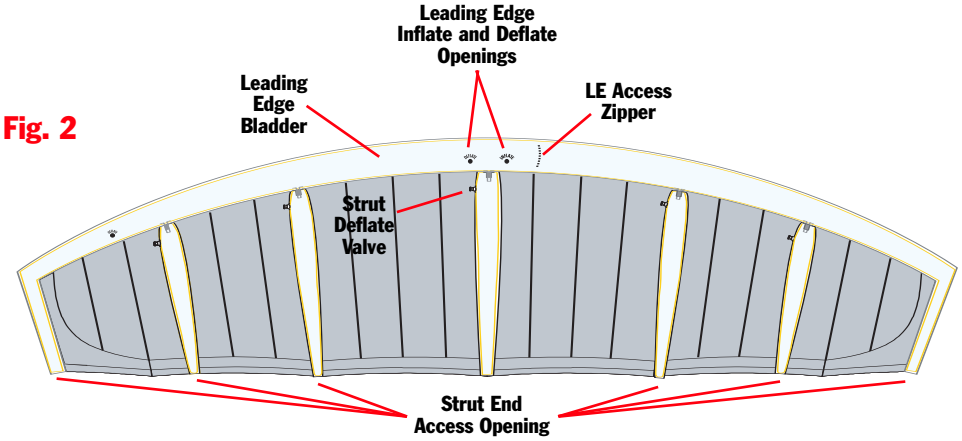
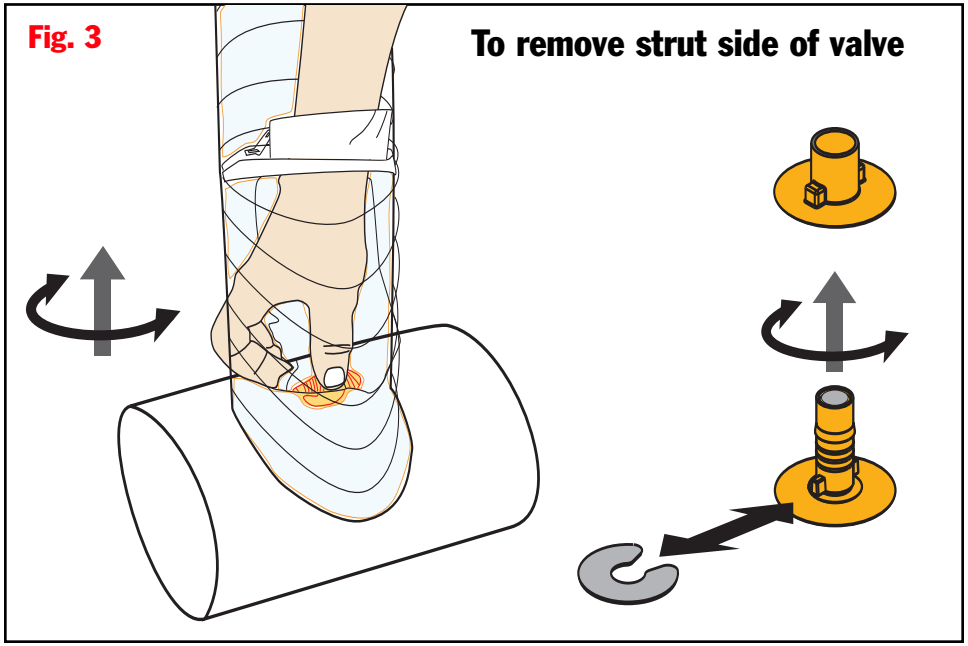
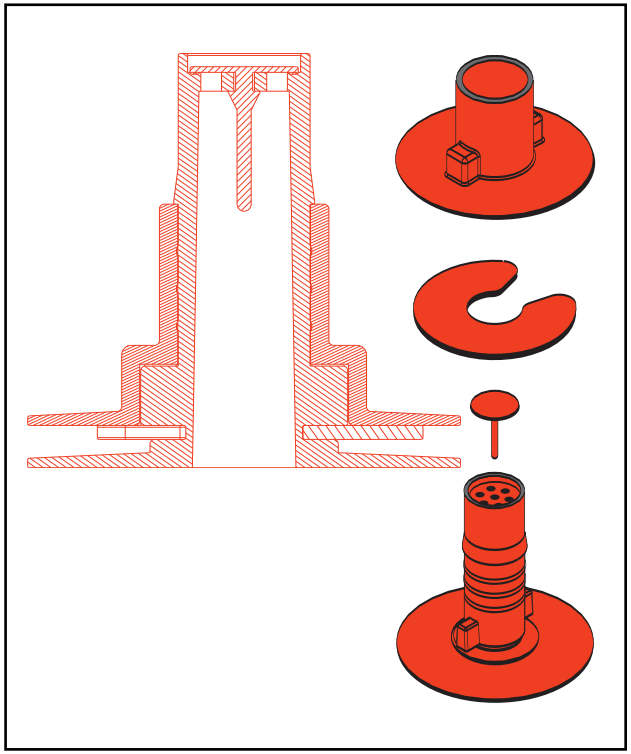


Fig. 3



Octopus Technology



Octopus Technology Included Parts

1. **Extra Inflation Valve Cap**
2. **5 - 10cm square 4 mil PU Bladder material patches**
3. **6 Rubber bands**
4. **4 meters of 30 lb test Monofilament fishing line**
5. **Naish Bladder Repair kit**

Thank you for purchasing your Naish kite featuring Octopus technology. You have chosen a product of the highest quality and performance. Please read this manual to familiarize yourself with the technical features and benefits built into every Naish kite that features the Octopus technology.

We strongly encourage you to get professional kiteboarding lessons from a reputable instructor before operating this or any traction kite.

How to Inflate your Octopus equipped kite:

- Close all strut valves.
- Close the deflate valves on the LE. (16m and larger kites have an extra deflate valve located on the leading edge near the wing tip)
- Inflate the kite at the LE inflation valve.
- Pump until the kite is very firm and rigid.
- Close the inflate valve with the velcro and valve lock bungee. Sit back and watch your friend still inflating his kite!

How to deflate your Octopus equipped kite:

- Open all strut valves.
- Open the deflate valves on the LE. That's it.

Inflation pressure:

Smaller kites require greater pressure in the bladder to hold their shape. Naish advises using our electric pumps "The Inflator" and "Jet Inflator" to inflate your kite. These pumps have a built in pressure sensor that will shut the pump off once it has reached the desired inflation pressure. Below are reccomended maximum pressures.

- 6m through 10m kites require a maximum of 8 psi or .55 mPa
- 12m through 14m kites require a maximum of 7 psi or .50 mPa
- 16m through 20m kites require a maximum of 6 psi or .40 mPa
- Inflate kite very firmly

Care of your Octopus equipped kite:

Tips for taking care of your kite include:
Note: The Octopus valves are not designed to hold air overnight or for long periods of time.
- Never store kite wet.
- Let it dry and remove excess sand from the kite before rolling it up. Use a hand broom to help remove sand from your inflated kite.

Rolling up your kite:
- You can roll up the kite with or without air in the struts.

1. You can fold the kite in half, then roll both wing tips together toward the center strut. The air will come out of the center deflate valve as you roll up the kite. After forcing all of the remaining air from the LE and struts, fold the kite in thirds. Put the kite in your Naish bag and use the side straps to compress it. Be careful not to let anything puncture the struts or leading edge while the kite is stored.

2. On kites larger than 16 meters, you will see a second deflate valve on the leading edge near the wing tip. Open this deflate valve. Begin to roll up the kite from the opposite wing tip.

Finding a leak in your Octopus equipped kite:

Each strut is isolated from the leading edge with a unique one way valve. You can isolate leaks in the struts by looking for which strut is getting soft at the same rate as the leading edge. (For example if a strut has a pin hole leak in it, the leading edge bladder will continue to push air into that strut to keep it inflated. At some point depending on how big the hole is the leading edge and the strut with the hole will both have less pressure than the rest of the struts. The solution is to fix the strut, check it before putting it back in the kite. Put everything back together and test the entire kite.)

If a valve is not seated properly you will probably hear a hissing noise and be able to identify which valve is not sealing properly. Stop and listen carefully at each Union Strut connection. If you are confident that all valves are seated properly you probably have a leak in your leading edge.

If the leading edge has a leak, all of the struts will stay fully inflated while the LE slowly deflates. As the LE deflates, leaks may occur around the valve. Watch for pressure on the LE to match the strut, indicating a leak in the strut.

Preparation for Leak Repair:

It is recommended that you don't attempt to make major repairs to bladders at the beach in the wind, sun and sand.

Double check to make sure you don't have a leak that is caused by something simple like a loose or partially open deflate or inflate valve.

Inflate the kite and let it stand. If you notice that one strut is more limp than others over time. Deflate the LE and push the internal Octopus valve for that strut and LE together through the outer casing of the LE and strut. Re-inflate and look for the leak over time.

If you have a leak caused by a puncture, take the kite to a comfortable and cool place out of the sun and wind. Read this manual carefully. Invite your best kiting friend over for drinks and a Octopus bladder fixing party. Crank up the tunes. Purchase and consume your favorite beverage. Relax and enjoy your off the water session.

Fixing a valve leak:

If one of your Octopus Valves leaks the simple solution for this problem is to purchase 1/2" PTFE Thread Seal Tape (commonly referred to as Teflon tape for plumbing pipe fittings).

Step 1: Wrap the tape approximately 8 times around the male portion of the Octopus valves as close to the base of the valve as you can.

You can do this without removing the LE bladder from the kite by forcing the Strut casing down to fully expose the male Octopus valve. You may need the help of a friend to do this.

Step 2: Reconnect the struts and reassemble the kite. (Refer to pages 8-11).

Fixing or changing the leading edge bladder:

Prepare for leading edge bladder removal by making sure the kite is clean and fully deflated.

Step 1:
Unfasten the Velcro patch located underneath the flap of material at the end of the elbow strut on the wing tip.

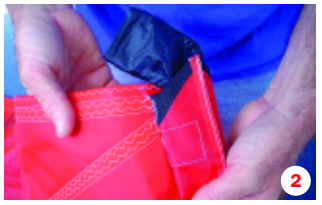
Step 2:
Pull the fold of fabric out of the strut end.

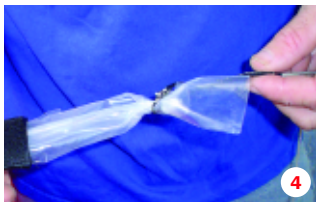
Step 3:
Disconnect the reinforcement and reach inside to find the bladder.

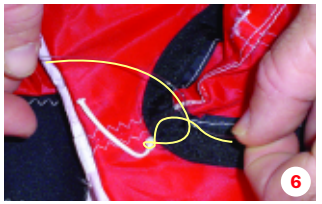
Step 4:
Attach kite line or string to the bladder and make sure it will not fall off inside the leading edge casing. You will need to disconnect all struts from the leading edge.

Step 5:
To do this unzip each strut access zipper. Reach inside with you finger and open up the strut to reveal the Octopus one way valve connection to the LE. Be sure to note how the bladder is positioned in the strut.

Step 6:
Be aware of the strut bladder feed string on each strut. Tie a piece of the monofilament line provided to the strut bladder feed string. Be sure it is a strong overhand knot.



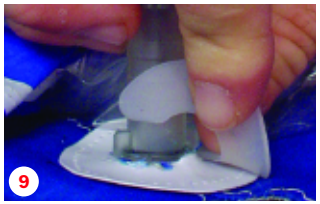




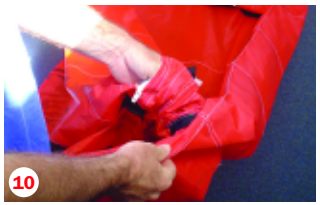
Fixing or changing the leading edge bladder (continued):

Step 7:
Push back the strut casing down to the LE casing.

Step 8:
Gently pull and rotate to disconnect the female valve on the strut from the male valve on the leading edge. Take care not to pull the strut bladder from the trailing edge of the strut casing or you will have to re-insert the entire strut bladder. Repeat this for all struts.



Step 9:
Remove the U washer from the male Octopus valve. (Important: Be careful not to loose this part)



Step 10:
Do not forget to push the Octopus valves from the strut side into the LE casing.

Step 11:
Once the Octopus one way valves have been disconnected from the struts you can push the deflate valves and inflate valve down into the LE casing.

Step 12:
You can now remove the leading edge bladder by pulling on the bladder from the zippered opening in the center of the LE. Make sure the kite line will feed through the elbow strut casing smoothly. If you don't have a second person you will have to weight down the kite at the wing tip in order to pull on the bladder from the center opening. Make sure the line feeds through smoothly.

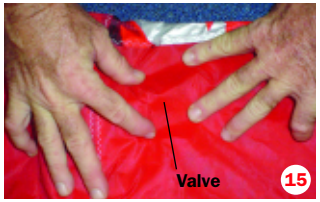
Step 13:
Tie off the line so it does not slip back into the LE casing.

When the leading edge bladder has been removed, you will need to isolate the leak in the bladder and fix it.

See: How to find a leak in the leading edge bladder, pages 13-14.

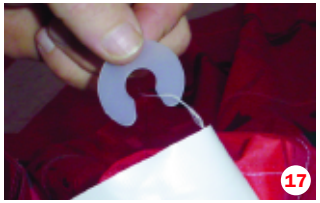
Step 14:
To reinsert the repaired bladder, layout the bladder next to the kite exactly how it should go in the kite. Be sure to note the inflate and deflate valves are aligned properly. Fold the bladder in half, then in half again so the tip of the bladder can be attached to the string coming out of the zippered LE casing opening. It is easiest if you have a second person to hold the wing tip and pull on the string. If you don't have a second person you will have to weight down the kite at the center in order to pull on the wing tip and string at the same time. Add talc powder to the bladder to help it slide into the casing easier.

Step 15:
Find the strut valves by feeling for them through the LE casing.



Step 16:
With one hand inside the strut casing and the other on the outside of the LE casing push the valve close to the internal strut opening and push it through.

Step 17:
Attach the U washer onto the valve.



Fixing or changing the leading edge bladder (continued):

Step 18:
Reconnect the struts to the leading edge. It is very important that you get a good connection to avoid a slow leak while riding. You can optimize the connection by laying it on flat surface and pressing the female valve on the strut straight down onto the male connection on the LE bladder.

Step 19:
Be sure the strut bladder is oriented properly, ie.longest point of bladder matched up with the longest point of the strut casing. The auto orient valve will prevent the bladder from being off 90° but it will not prevent the bladder from being positioned 180° off. If you forgot to put the monoflilament line on the bladder feed line, there is a small string on the bladder that indicates the longest part of the bladder. This should be oriented on the canopy side of the strut.

Step 20:
Be sure to fully close the casing zipper and hide it under the strut casing so that it doesn't accidentally open.

Repeat the above procedure for each strut.

Step 21:
Be sure to close all LE openings and strut end openings. Seal off wing tips by folding in the flap and reattaching the velcro.

Step 22:
Inflate the kite. Be sure to inflate the kite 50% and examine the leading edge to see if there are any obvious twists in the LE bladder. If the twist appears to be only a minor twist you can sometimes deflate and rub the casing to get the bladder to reseat itself. If the LE appears to have a major twist, remove the side the twist is on from the LE casing. Follow the same procedures as before for disconnecting struts. Reinsert the bladder and reconnect the Octopus one way valves. If it appears to be properly installed continue inflating listening for leaks between the struts and LE bladder.

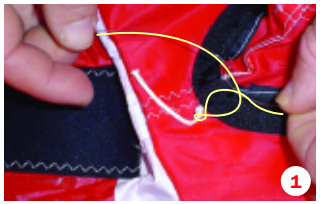
Pic 23
While the kite is half inflated check LE bladder and each strut carefully to make sure the bladder is oriented properly and filling the entire strut casing. Especially check near the union strut connection on the canopy side. If each on appears to be installed properly, continue inflating kite. If not, deflate the kite and fix the problem strut.

Once the kite is inflated and appears correct, leave it inflated for a several hours to make sure there are no slow leaks.

BLADDER MAINTENANCE

How to remove a strut bladder:

Step 1:
Attach monofilament line provided or string to the bladder feed line located on the canopy side of the strut casing and make sure it will not fall off inside the strut casing.



Step 2:
Unzip each strut access zipper. Reach inside with you finger and open up the strut to reveal the Octopus one way valve connection to the LE.

Step 3:
Be sure to note how the bladder is positioned in the strut. You can use a marker to note its position. This step is necessary only if you loose the bladder feed line into the strut casing.

Step 4:
Remove the U washer from Octopus valve.

Step 5:
Gently rotate and pull to disconnect the female valve on the strut from the male valve on the leading edge. As you do this you will feel the ridges on the valve.

How to remove a strut bladder (continued):

Step 6:
Unfasten the Velcro patch located inside the end of the strut. Pull the fold of fabric out of the strut end and find the bladder.

Step 7:
You can now remove the strut bladder by pulling on the bladder from strut end opening. Make sure the bladder feed line will slip through the union strut connection smoothly. Tie off the feed line so it won't be pulled back into the strut casing. When the strut bladder has been removed, you will need to isolate the leak in the bladder and fix it.
See: How to find a leak in the strut bladder, page 15.

Step 8:
To reinsert the repaired bladder, layout the strut bladder next to the strut exactly how it should go in the kite. Be sure to note the deflate valves are aligned properly. If you don't have a second person you will have to weight down the kite. Add talc powder to the bladder to help it slide into the casing easier.

Step 9:
Stuff the Octopus valve into the strut end opening.

Step 10:
Gently pull on the monofilament until the white bladder feed line string appears. Be careful, don't pull the bladder through the small opening. Leave the monofilament line tied on until th repair is completely finished and you've checked for twists.

Reconnect the strut bladder to the leading edge bladder. It is very important that you get a good connection to avoid a slow leak while riding. You can optimize the connection by laying it on flat surface and pressing the female valve straight down onto the male connection on the LE bladder. (Be sure the strut bladder is oriented properly, ie.longest point of bladder matched up with the longest point of the strut casing. The auto orient valve will prevent the bladder from being off 90° but it will not prevent the bladder from being positioned 180° off.) Be sure to fully close the casing zipper and hide it under the strut casing so that it doesn't accidentally open.

Step 11:
Close off strut end openings and access zipper. Inflate the strut only using the deflate valve. Be sure to inflate it 50% and examine the strut to see if there are any obvious twists. If the twist appears to be only a minor twist you can sometimes deflate and rub the casing to get the bladder to reseat itself. If the strut appears to have a major twist, remove it and follow the same procedures as before for reinserting it. Once the strut is inflated and appears correct you can test the entire kite.

How to find and fix a leak in the leading edge bladder:

You will need:

- PU Bladder Material in 40 cm square
- Rubber bands for each valve
- Kite Pump
- Tub of water
- Naish bladder repair kit
- Large permanent marker pen

Step 1:
After the leading edge bladder has been removed from the kite. Layout the bladder length wise and turn all of the Octopus valves facing up.

Steps 2 - 4:
Use the PU squares supplied. Place the plastic over each male Octopus one way valve and use the rubber bands to seal all of these valves for pressure check.

Step 5:
Inflate the leading edge bladder with your kite pump. Be sure not to over inflate the bladder. Only inflate it enough to hold it's natural shape. If you notice an uneven shape you have over inflated it and caused an embolism. These spots are noted by being more white and opaque than the rest of the bladder. It will also appear thinner and wrinkled when the bladder is not inflated. This is a weak point in your bladder. Check carefully for leaks in this area without stressing it more. Perform a visual and sound check of the bladder to hunt for obvious sources of leaks.

How to find and fix a leak in the leading edge bladder (continued):

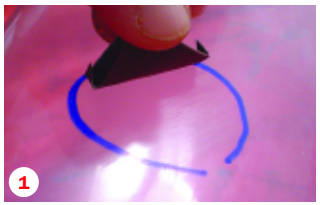
Step 6:
Perform a leak test on your bladder by inflating it and dunking it in a tub of water.

Step 7:
Note the leaks with marker when you have found them. If there are no obvious leaks, take the tub of fresh water. Do not use salt water. Start at the center of the bladder and work your way to each end dunking the bladder into the water and looking for a steam of air bubbles.

Refer to the "How to use the Bladder Repair Kit to fix your bladder" section below.

Step 8:
Perform a leak test on your repaired bladder by inflating it and dunking the repairs in the tub of water. Check for leaks. Repair any leaks with additional patches. Do not try to remove a patch from the bladder. Let the bladder stand for one hour to dry off and make sure there are no additional leaks.If the bladder is holding air pressure you can remove the rubber bands and plastic from the Octopus one way valves and prepare to install the bladder back into the kite.

How to use the Bladder Repair Kit to fix your bladder:



A clean dry surface is very important. Prepare the bladder by removing talc and dirt from the surface.

Step 1:
Lightly scuff it with the sand paper that is included in the repair kit.

Step 2:
Peel the patch from its backing. Press the patch onto the bladder from the corner. Avoid air pockets and getting finger prints on the patch.

How to find a leak and fix a leak in a strut bladder.

Steps 1 - 2:
Locate the large inflation attachment located on hose end of your pump. Take the piece of PU bladder material, wrap it over the pump valve and use the rubber band to seal it off.

Step 3:
After the strut bladder has been removed from the kite. Layout the bladder and expose the female Octopus valve. Twist it gently into the female opening of the valve to seal it off.

Step 4:
Inflate the strut bladder with your kite pump. Be sure not to over inflate the bladder. Only inflate it enough to hold it's natural shape. If you notice an uneven shape you have over inflated it and caused an embolism. These spots are noted by being more white and opaque than the rest of the bladder. It will also appear thinner and wrinkled when the bladder is not inflated. This is a weak point in your bladder. Check carefully for leaks in this area without stressing it more.

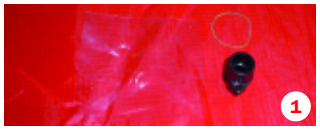
Step 5:
Use a tub of fresh water. Do not use salt water. Dunk the bladder into the water and looking for a stream of air bubbles.

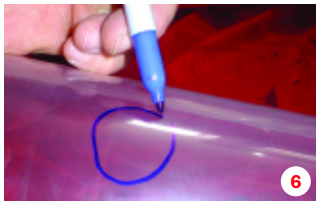
Step 6:
Be sure to mark the leaks with a marker so you will be able to find them when the bladder is deflated.

Refer to the "How to use the Bladder Repair Kit to fix your bladder" section on Page 14.

Step 7:
Perform a leak test on your repaired bladder by inflating it and dunking the repairs in the tub of water. Check for leaks. Repair any leaks with additional patches. Do not try to remove a patch from the bladder. Let the bladder stand for one hour to dry off and make sure there are no additional leaks.

If the bladder is holding air pressure you can remove the cap from the Octopus one way valves and prepare to install the bladder back into the kite.





Naish Warranty Policy

Naish warrants this product to be free from major defects in material or workmanship to the original purchaser for a period of ninety (90) days from the date of purchase. This warranty is subject to the following limitations: The warranty is valid only when the product is registered at the warranty section of the Naish website (www.naishkites.com) within seven (7) days from the date of purchase.

The warranty is valid only when this product is used for normal recreational activities, and does not cover products used in rental or teaching operations.

Naish will make the final warranty determination, which may require inspection and/or photos of the equipment, which clearly show the defect(s). If necessary, this information must be sent to the Naish distributor in your country, postage prepaid. Product can be returned only if a return authorization number (RAN) is given in advance by the Naish distributor. The RAN number must be clearly labeled on the outside of the package, or it will be refused.

If a product is deemed to be defective by Naish, the warranty covers the repair or replacement of the defective product only. Naish will not be responsible for any costs, losses, or damages incurred as a result of loss of use of this product.

This warranty does not cover damage caused by misuse, abuse, neglect or normal wear and tear including, but not limited to, punctures, rigging with other than Naish components, damage due to excessive sun exposure, or damage due to over inflation of the bladders, damage cause by improper handling and storage, damage caused by use in waves or shore break, and damage caused by crashing the kite at high speed or damage caused by anything other than defects in material and workmanship.

This warranty is void if any unauthorized repair, change or modification has been made to any part of the equipment.

The warranty for any repaired or replacement equipment is good from the date of the original purchase only. The original purchase receipt must accompany all warranty claims. The name of the retailer and date of purchase must be clear and legible. There are no warranties, which extend beyond the warranty specified herein.

Limited Warranty Registration

Thank you for purchasing a Naish product. To receive full warranty and customer service benefits, you must register your product within 7 days of purchase at the warranty section of our website.
Register product at:

www.naishkites.com