



## **DaHo Hollow Spectra Needle Tools Lifetime Guarantee to Purchaser**

All DaHo needle tools are guaranteed to be free from manufacturing defects for the lifetime of the product. If you have any problem with the product, email us and we will have you return the product to our office. We will replace any defective product, and return it to you, via First Class Mail, at no charge.

## **DaHo Needles General Information & Helpful Hints**

**Hollow Spectra line and needle sizes** - The open middle braid size of each hollow Spectra line is unique. We have attached our generic recommendations of line sizes for each of our needles, here and on our website. If your needle is very difficult to thread, try opening up your line with a loop needle. Our needles should go up the size lines we specified. But, all brands of hollow Spectra line are not the same size. We are adding specific hollow Spectra line sizes to our website as we can get samples of the line. Also, each person using our needles may have different perceptions of what does, and does not, feel right.

**Mono** -The term 'Mono' is short for any type of monofilament or fluorocarbon lines.

**Starting a needle in the end of your hollow Spectra line** - The Spectra line is usually fuzzy at the end, and will flatten out when any pressure is put on it, making the center hollow chamber of the braid difficult to find. The recommended place to work with your needles is on the edge of a table. Put the line on the top of the table, extending straight for a foot or more, and place the end of the line at the table edge. This position gives you the best ability to move the needle into the right position to enter the line.

You need to use the point of your needle to find the center of the Spectra line. Once you have found the hollow center of the braid, the outer part of the line should look consistent in color and texture, and your needle should go up inside the Spectra line with relative ease. If it is snug and difficult to insert, try a smaller needle first, if available. Needles close to their Spectra line size limit will be tighter.

If your needle point keeps going through the line or you can see the needle being exposed through the line, your needle is not in the hollow center of the line. Back up, pull the line end straight, and try again, pointing the needle toward the center of the line. Trying to make the end of the Spectra line more round can also help you find the center. If you think the end of the Spectra line has been abused too much, cut off an inch or so, reposition the line and try again. Just remember, soon you will be an expert.

**Inserting a needle into the side of the line** - Many procedures require you to insert your needle into the side of your hollow Spectra line. In this task, you also are looking for the hollow center of the braid. But in this task, you must start the insertion with the needle point at a 45% angle to the Spectra line. Hold down a 2" spot on the line. Once the needle point has entered the Spectra line, but before it hits the table, start bringing the angle of the needle down towards the table, while searching for the line's center. Try to hold the line down on the table surface about 1/4" in front of the needle point. Then, using the inserted point of the needle, lift up the line a little and while it is bunching up, search for the center.

**Feeding the needle inside the hollow center of the Spectra line** - Regardless of how you started your needle, feeding the needle and its attached line, if any, is done the same way. You always want the line stretched out straight, at least a foot or more on a table surface. Sit with the needle in hand, pointed at the place the line comes off of the table surface and about 6 inches away. Thread the line onto the needle, keeping the needle in the same 'line' as the Spectra being pulled off of the table. The shape of the needle point will keep the needle in the line's middle as long as the needle point and line are kept inline.

Pull the line over the needle, from a point down a few inches on the needle. You will develop a process with your hands to pull the line onto the needle with one set of fingers, and hold it on the needle with the

other hand, until it bunches up on the back of the needle. When this happens, hold the needle close to the point, reaching toward the back of the needle, slide the bunched up line off the needle and down any attached lines. Be sure to not put too much pressure on the attached lines. Continue in this manner until you have gone far enough to complete your task. When you are at that point, you just reach up and hold the incoming line at the needle point, fold it over and push the needle point out of the line.

**Removing the Tag Line Ends** – With many procedures, you will end up with line ends sticking out of your line. What you do to get rid of them, is to pull it out of the line it is inside of about 1/2". Then cut off the tag end of the line close to where it goes into the outer line. After it has been cut off, smooth out the outer Spectra line going from the center of the process, towards the area where the tag end was cut off. The remaining tag end will slip into the outer line and will disappear.

**Using the DaHo Reverse Latch Needle** – The little latch mechanism on the end of the DaHo Reverse Latch needle can come open and release the line you have put into it, before it goes into your hollow Spectra line. To stop this from happening, you should wait and not put the line into the latch mechanism, until the latch is very close, within a few inches, of going into the hollow Spectra line. That way, you can better manage it until it goes into the line. Once the latch is in your hollow Spectra line, the internal pressure of the line's braid will hold it closed with its contents safe.

**Straightening out DaHo Needles** - All DaHo needles are made from 304 Stainless Steel Hypodermic tubing. In order to keep the outside size of all the threading needles as small as possible, thin walled tubing is used. Our loop splicing and reverse latch needles use heavier walled tubing as their inner sizes are not a factor. They are all very strong and will not fail under normal use. If they are bent far enough to crease the tubing wall, they will not function properly and will have to be replaced. This would require some type of pressure on the needle that would not happen during any normal use.

Sometimes, especially with the smaller sized threading needles, they will bow or slightly bend from normal use. They will still be the same diameter as they have been, with no creases or flat spots in the tube, just not as straight. This does not affect their use, but is a situation that can be easily 'fixed' if desired - you can straighten them with your hands.

What you do is sit down and hold the needle end that is further away from the bow/bend in your hand. Usually, if you are right handed, hold the needle in your left hand, and vice versa. Position your hand on or close to your lap, holding the needle vertical. Then, looking down the shaft of the needle you are holding, you will be able to see the bend location. Position the needle in your bottom hand, so that the bow/bend is going away from your body.

Then, with your other hand, position your thumb a little above and your first finger slightly below and more in line with the needle shaft leaving a small gap between them. Then, you can apply a pressure with your finger to the opposite side of the bow/bend location while using your thumb to hold the upper part of the needle above the bend location. Continue doing this, while moving your hand up the shaft of the needle only applying the pressure at the bow/bend location. It doesn't take much pressure to see the effects of your efforts. Start out with a light pressure and increase it as needed. You will see it bending and can adjust the pressure as you go. You can reposition the needle in the hand that is holding it on the bottom, to realign the bow/bend so you can most easily see and work on it with your other hand. If the needle is rotating while you are trying to straighten it, hold it firmer in your bottom hand. You can also swap the ends of the needle to get a better perspective on the area of the needle that you need to straighten. After a very little practice, you will be able to straighten your needles with ease.

## Splicing Hollow Spectra Lines Together

Daho Needle Type Used: [Loop Splicing or Reverse Latch](#)

One of the most valuable features of hollow Spectra line is being able to splice two different hollow Spectra lines together, without any knots, and maintain 100% line strength. Besides keeping your reel's spool full, you can also splice different sizes of hollow Spectra lines together to address specific needs at certain locations in the line. You can also splice on pre-built topshot or wind-on leaders.

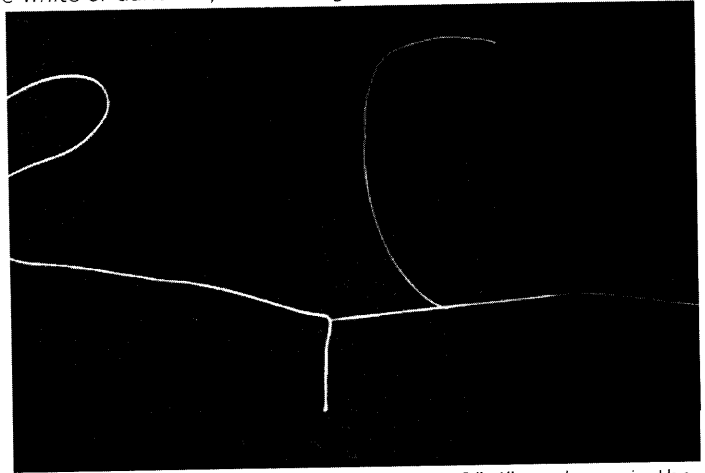
We are going to splice a white line (coming from the left) and a dark color line (coming from the right) together, so you can identify each line better in the following pictures. So, to keep it simple, you should pick each line you are splicing, as being the white or dark line, when using the instructions below.

We are going to insert the end of each line inside the end of the other line about 12" on each side. When the lines tighten, this will cause two 'Chinese Finger Cuffs' in the ends of the lines locking the two lines together.

So, the first thing we do is to insert the needle into the side of the dark line about 15" from the end of the dark line. Insert most of the needle.

Once that is done, put the end of the white line into the loop or latch of needle you are using.

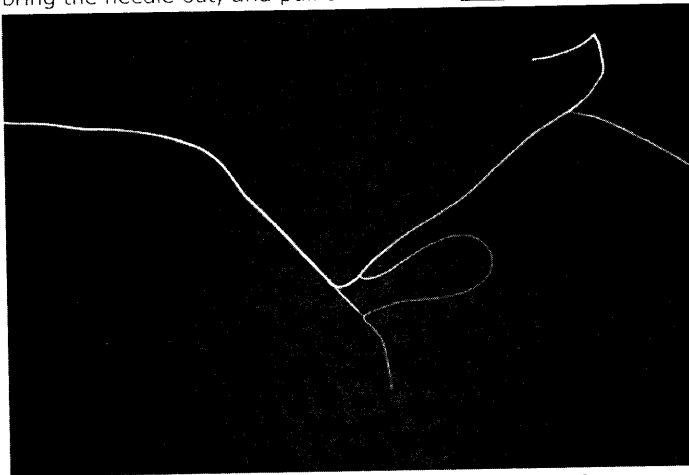
When you have taken the needle and white line about 12" up the dark line, bring the needle out, and pull the end of



the white line out 3"-4" as shown in the upper right of the picture to the left.

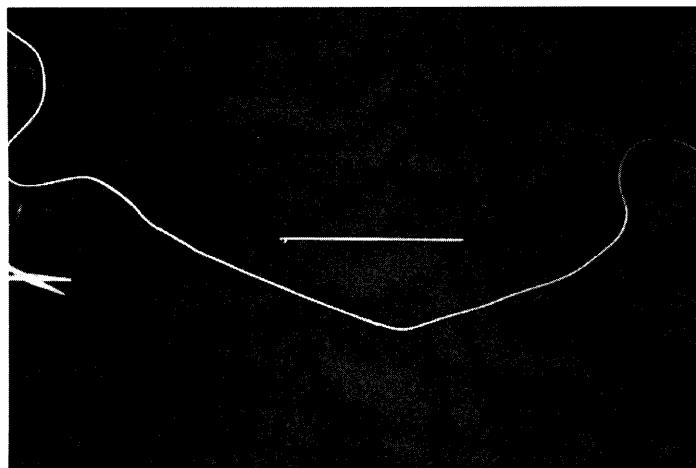
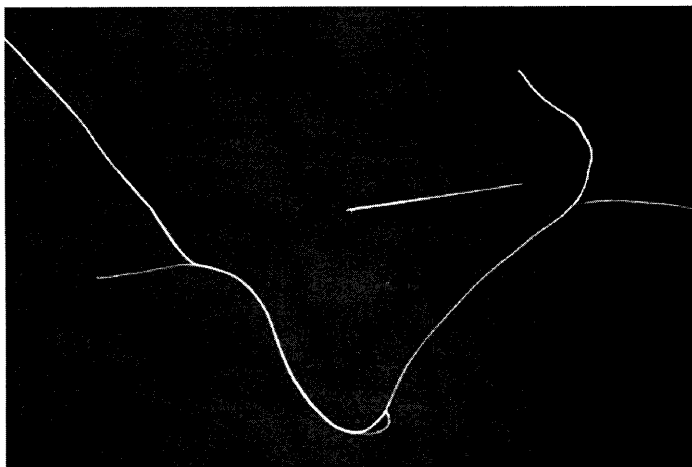
Then, insert the needle tip into the side of the white line, going away from the end of the line, about 1" from the dark line. Put the end of the dark line in the loop or latch of the needle, and again thread the needle and the attached dark line about 12" up the white line.

After you have threaded the needle and dark line up the white line about 12", do the same as you did on the dark side – remove the needle and pull the tag end of the dark line snug. The lines will now look like the following picture on the next page.



As you can see in the picture, there is a gap in the middle of our splice. You resolve that by pulling the tag ends of each line until the center of the splice is together and solid. Then, from the center of the splice, smooth out both of the outer lines with your fingers, going away from the center of the splice.

Once you have done that on both sides, remove the extra tag line ends. Holding the tag end, pull down the line that it goes into about 1/2" and cut off the tag end where it enters the other line. After you have cut the tag end off, you can smooth out the outer line, again going away from the center splice and it will disappear inside the line.



Do this for both sides and you are done. Your spliced line is 100% strong and ready to go.

Many people find it simpler to splice their topshots and wind-ons onto their lines, rather than using loops that are described in the next section of this booklet. Both methods work well and offer similar full line strength connections.

### **Splicing Solid Spectra Line and Hollow Spectra Line Together**

Daho Needle Type Used: Loop Splicing or Reverse Latch

You can splice your Hollow Spectra line to solid spectra line. Insert approximately 5 feet of the solid spectra line into the end of the Hollow Spectra line. Then remove the needle with the attached solid spectra line, and finish the end of the inserted line as described above, and in other places, in these instructions. Once that is done, secure the end of the Hollow Spectra line with an overhand knot, or nail knot, and finish by applying glue. Please check information on page 12 for more details.

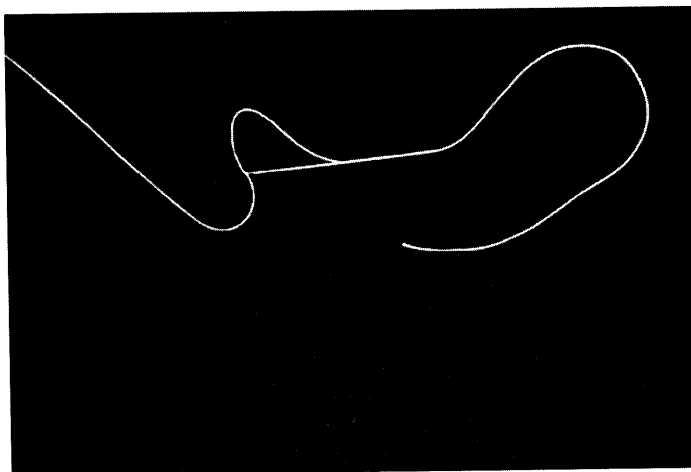
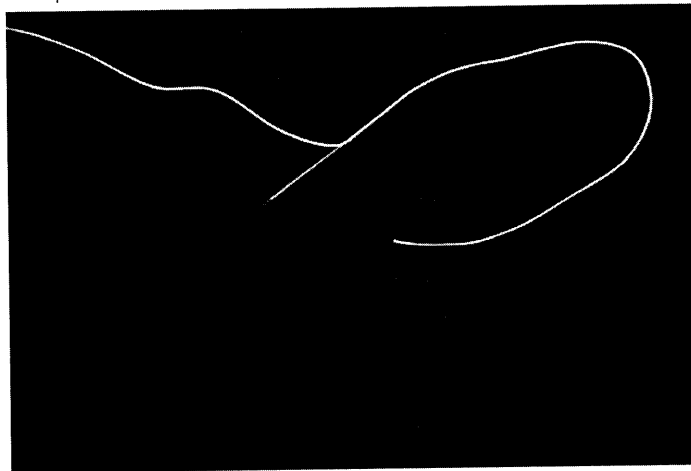
## Making Hollow Spectra End Loops

Daho Needle Type Used: Reverse Latch

Many topshots and wind-ons terminate with a loop. You can also end your hollow Spectra line with a loop. Then, you can quickly and easily change the end section of your line with pre-made loop terminated topshots and wind-ons. This process requires a Reverse Latch needle to complete, as the line holding mechanism of the needle must be able to open and release the line in the middle of the operation.

If you are planning on using commercially made topshots, check to see what size of loop you need to attach them to your line. Usually, they are on spools that need between 5" and 6" of loop size on your line.

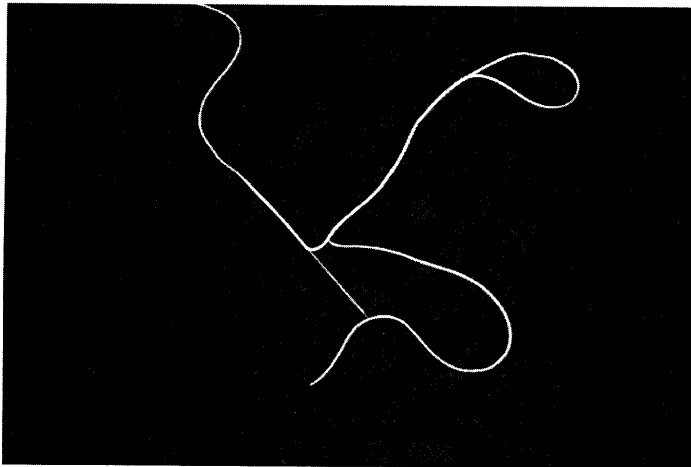
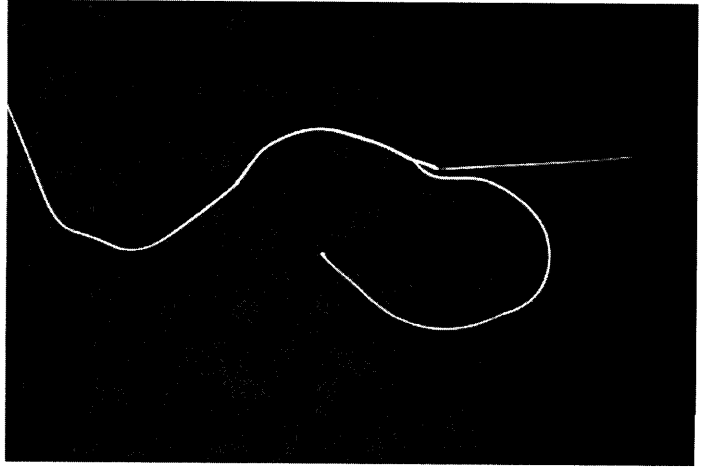
First, you must select a spot about 24" from the end of your line. Insert your Reverse Latch needle at that location with the tip of the needle going towards the end of the line, as shown in the picture to the right. Continue threading until most of the needle is into the line.



When it is mostly in, put a loop of the line, coming from the spool end, in the needle's latch, so that it will be about the size of the loop you want to end up with at the end of your line - usually 5-6". Keep threading the needle, and attached loop of line, into the line for a total of 12". Then, bring the needle out of the line, pulling the looped line in the latch with it, as you can see in the picture on the next page.

As you keep pulling the needle and loop out from the line, the outer line will begin to turn inside out. You can slide the outer line down, toward the spool end and also use the tag end of the line to finish turning the 12" of threaded line inside out.

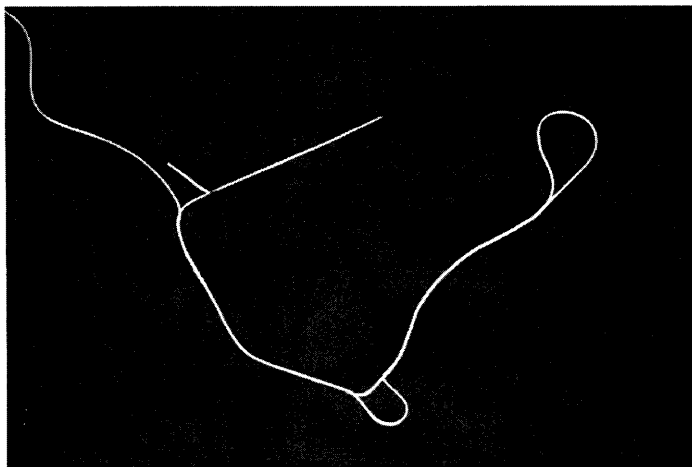
In the picture below, you can see the line as it will look when fully turned inside out. Because of the size limitations of this booklet, the next process has also already been started.



At this point, remove the Latch needle from the newly formed loop and smooth out the inside out line.

Now, insert the needle into the line about 1/2" from where the tag end of the line comes out of the inside out line. Thread the needle in about 5" or so, and put the tag end of the line into the needle's latch.

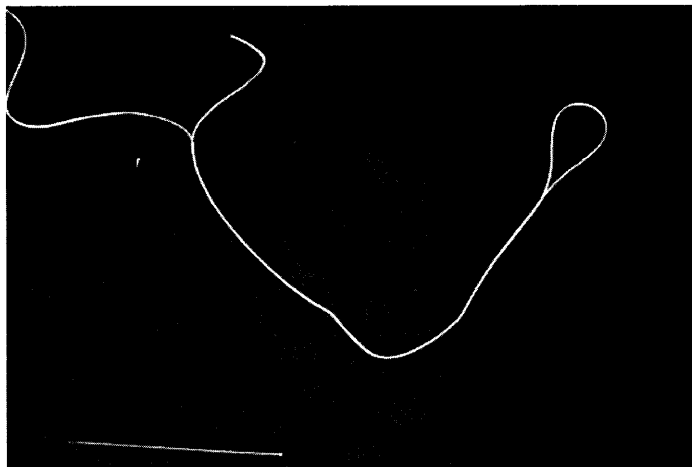
After you have the tag end of the line in the latch, thread about 12" total and exit the line with the needle tip. Pull the needle and the attached line tag end out of the threaded line, as you can see in the following picture on the next page.



Remove the needle, leaving the tag end of the line out. Now, using the inside loop line and the tag end, smooth out the threaded line and close up the gap between the two threaded parts that are making this loop in the line.

Also, smooth out the upper threaded line so it is all smooth and there is no gap between the two sections of threaded line. When you are done, it should look like the line below.

Now, hold onto the tag end still exposed and pull the end out 1/2" or so and cut it off. Smooth the line out and the cutoff tag end will go inside of the outer line. Your splice is now done. You can attach any loop terminated extension to your line with 100% line strength.



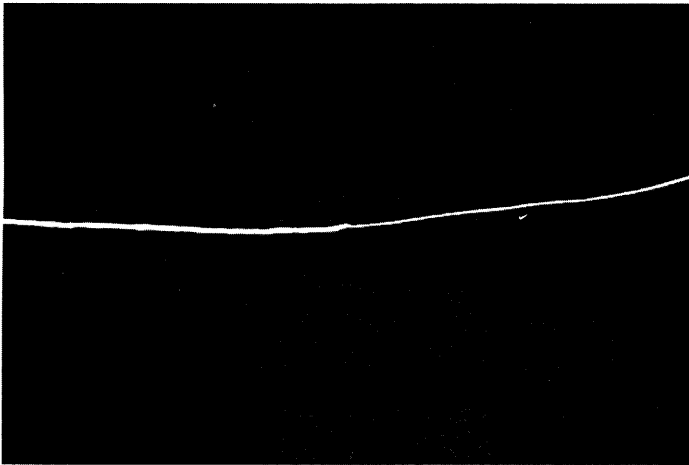
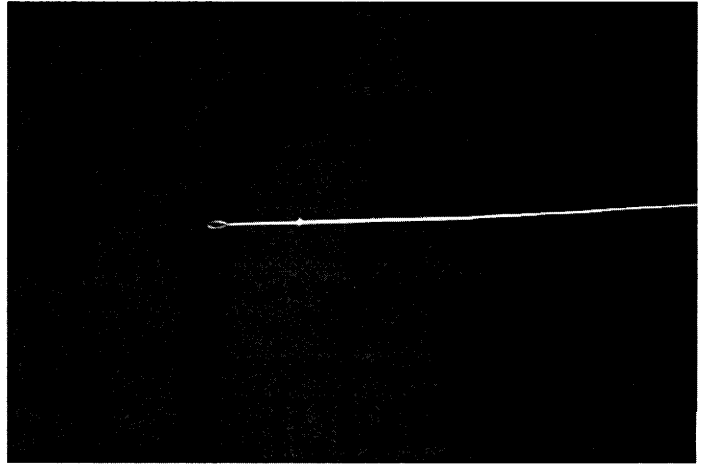


## Opening Up Hollow Spectra line with a Loop Splicing Needle

Daho Needle Type Used: Loop Splicing

When you are working with hollow Spectra line that is small for the size of needle you want to use, you can take a loop splicing needle, which fits well in the line, and thread it through the line, opening up the braid of the hollow Spectra line. This procedure will expand the interior, and exterior, size of the hollow Spectra line so you can use larger needles that you need to do the ultimate task you want to do.

Insert the loop splicing needle into the end of the Spectra line and thread it into the center. As you thread, the line will bunch up at the needle's loop. As this happens, hold onto the Spectra and the needle, close to the needle point and with your other hand, slide the bunched up line down the needle and over the loop. The larger wire loop opens up the line's braid. Do not pull on the larger line that is below the needle, as it will make the line smaller again.



Keep threading as far as you want the open line to be. When you have reached your goal, stick the point of the needle out the side of the Spectra line and remove it. Now, your opened up Spectra line will be physically larger, see picture to the left, and will accept larger needles and lines inside with much less resistance.

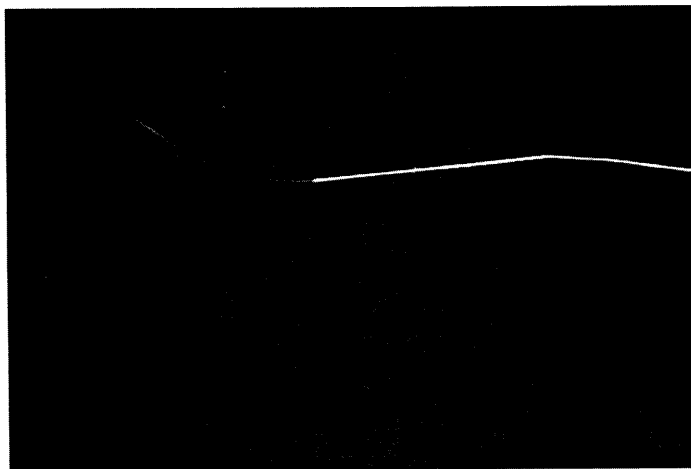
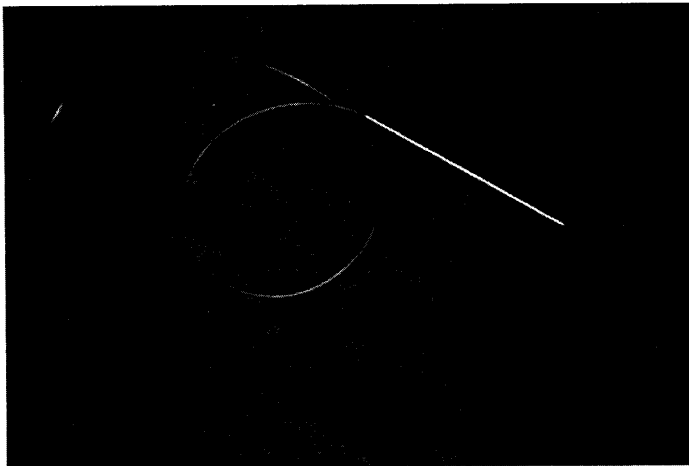
## Threading Mono Line Into Hollow Spectra Line

DaHo Needle Type Used: Threading

One of the major features of hollow Spectra line is the ability to thread, or insert, mono type lines inside it, without knots, while retaining almost full line strength. Spectra line is very strong, but does have some limitations. It does not stretch, or deal with abrasion well, and is very visible to the 'locals'. Many folks like to extend the end of their Spectra line with a topshot or wind-on leader ending in mono type lines. You can also thread mono directly into the end of your hollow Spectra line if desired.

Also, removing the knots from your lines, which are not needed with hollow Spectra line, will save your hardware (rod guides, tips, etc.) and software (thumb) from the destructive problems using knots can cause. And, all the connections made with hollow Spectra lines are stronger than any made with knots.

First select the correct size DaHo hollow threading needle, so your mono line will fit inside snugly. If it is a little loose, pull it out from inside the needle a few inches. Put a couple of hard bends in the mono line and reinsert it into the needle. The bends should now help the line hold tighter onto the needle.

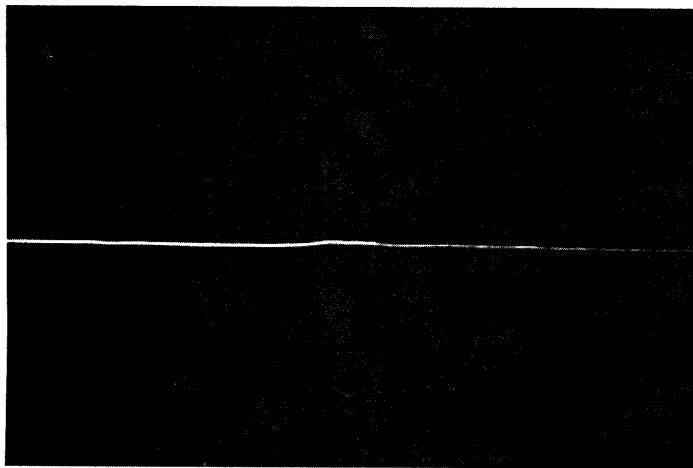
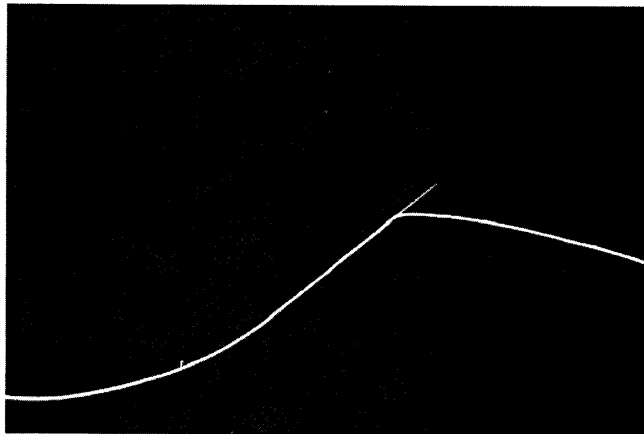


You then thread the threading needle, with the mono line in it, into the end of your hollow Spectra line as shown below.

Typically, you will thread the needle and mono line into the Spectra for 3 to 5 feet. While threading the line, keep sliding the Spectra line down the needle and attached mono line – don't pull the mono out of the needle or you will have to pull out the mono, put it back in the needle and thread it into the Spectra line again.

When you have reached the desired length, exit the Spectra line. Hold the lines in back of the needle and extract the needle, leaving the mono line end exposed as shown to the right. Slide the Spectra line down the mono line a couple of inches and cut off the mono line about 2" from where it enters the Spectra line. Remove any sharp or rough edges from the end of the mono line, so it will not cut or damage the braid on the inside of the outer Spectra line over time.

Then slip the Spectra line over the mono and it will disappear into the Spectra line.



The point where the end of the hollow Spectra line and embedded mono line meet, AKA the join point, must be secured so the inside mono line will not slip until the stretch on the Spectra line causes the braid to tighten on the inside mono line and binds the two lines together. It is called the 'Chinese Finger Cuff'.

It is very important to secure this join point, at the end of the hollow Spectra line. The reason for binding the two lines together at this point is to prevent any slippage of the inserted mono line, until the pressure on the hollow Spectra braid is sufficient to hold it. Care must also be taken that the mono line be of the right size range for the hollow Spectra line that is holding it. If the mono line is too small for the braid structure of the Spectra line, it may slip out of the line under heavy pressure.

To prevent the imbedded mono line from slipping out of the hollow Spectra line until the braid tightens, there are a number of securing techniques used. These techniques will be discussed on the following page.

## Securing Mono Line Threaded Into Hollow Spectra Line

Daho Needle Type Used: None

There are a number of ways used to secure and finish the end join point, where the hollow Spectra line ends and the threaded mono line is exposed. This is done to hold the mono line from slipping until the Spectra braid has tightened enough to hold it securely. Each technique has unique features and requires various tools to use. We will identify and discuss each of the most used techniques here, but you will have to visit our website, or use more detailed instructions, from other sources, to complete them. They are:

1. **The Half-Hitch System** – In this technique, you tie a series of half-hitch knots in succession that will cover the end of the hollow Spectra line and extend onto the imbedded mono line. This usually takes about 30 knots to complete. Usually, this is done with the line pulled tight in a serving jig, and light to medium waxed Dacron line is used. When using this technique, care must be taken to ensure all of the knots are of consistent pressure. This method leaves a fairly large profile, or size of the process, that can have some issues when going through your rod guides.
2. **The Serving System** – This technique uses a winder tool and requires that the line be held taut in a serving jig. This system uses about a 2", or longer, wrap of horizontal circles around the end of the Spectra and start of the mono line. The tension is not as tight, as the other techniques, but there is much more area that has a constant pressure applied. It is similar to what is done to the center of a bow string - only it is done with very fine, 20# to 50# solid Dacron or Spectra 'threads'. When done right, with the right size of threads, this technique results in a very small profile when finished. There is a large following using this technique.
3. **The Nail Knot System** – This technique usually uses a serving jig to hold the line tight, but it can be done without the jig. You again use very thin 20# to 50# solid Spectra line. You tie the nail knot about ¼" from the end of the hollow Spectra line. Use a Daho Loop Splicing needle, under the knot, to pull the last tag end out under the loops. After the knot is made, the tag ends of the line, used to make the knot, are tightened until the knot turns clear. This is how you know the knot is tight enough. Then, the tag ends are trimmed. When done, with the right size of threads, this knot has a very low profile and is a good way to effectively secure the join point.
4. **The Sato™ Metal Crimp System** – The Sato™ metal crimp system uses very precise sizes of metal sleeves. They are slid onto the end of the hollow Spectra line and crimped onto the lines about ¼" before the end of the hollow Spectra line, using special crimping pliers. This technique also produces a very small profile and will not affect your rod guides.
5. **Glue** - There are a number of special glues available that are designed to hold the mono and Spectra line materials together at the join point. It is also possible to only use glue to secure the join point of your lines, but it has the least amount of holding security of all the techniques.

Each of these techniques can be effective and each has a following. Also each of them requires different tools and materials to complete properly. The one addition, which should be used with all of the above systems, is to finish the processed area with special glue designed for use with Spectra and mono line materials. This will help to keep everything from fraying or coming apart from use.

**We recommend you ask your local DaHo, or Spectra line, dealer to recommend the securing methods you need, and use that product's instructions to complete your mono threading task.**