

Reducing Rod Breakage

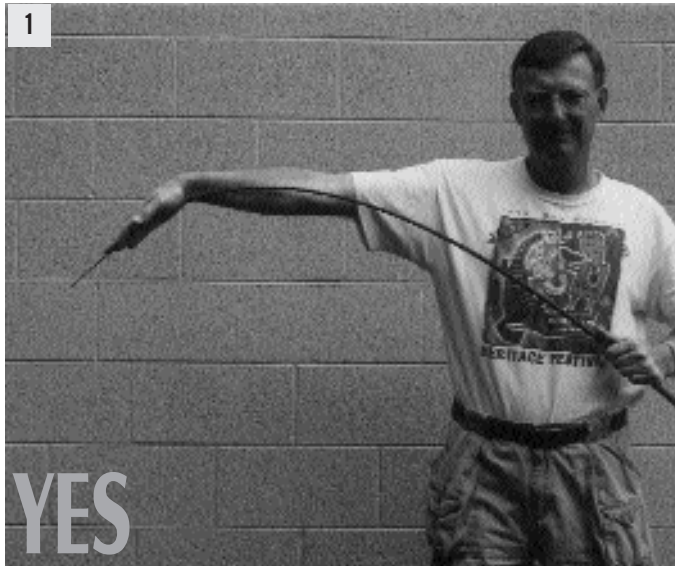
You can't totally eliminate broken rods, but you can educate your customers on proper fish fighting and rod handling techniques. In the process, you stand a very good chance of reducing the number of rod failures that can be attributed to poor rod use.

by Tom Kirkman

Most custom rod builders dread the prospect of facing a customer who has just broken his expensive custom rod. About the best thing that can happen in such an instance, is that the customer will tell the builder that it was an accident, he broke it and is prepared to pay full price for another one. The worst that can happen, and which is the rule more than the exception, is that the fisherman has no idea how it broke, it must have been defective, and he'll expect a new one in a couple weeks at no charge.

Rod builders, much more than the average fisherman, understand the things that cause rods to break. We know that roughly 98% of all rod failures are due to some sort of accident or abuse on the part of fishermen, not actual defects in parts or assembly. Over the years I've often wondered if at least some of these failures couldn't be prevented if only fishermen understood the various actions that break rods and how to prevent them from occurring. While fishing with other anglers, I've often witnessed something which I knew was putting a rod in danger and when I pointed it out to the fisherman, he'd usually reply with something like, "Gosh, I didn't know that would hurt a rod."

Designing and building a rod is only part of the custom rod builder's job. Wise builders spend a few minutes with each customer, going over the proper care of their new rod and how to avoid the things that can easily result in breakage. Most anglers who have spent top dollar on a quality rod are more than willing to take good care of it, provided they are given some guidelines for doing so. With that in mind, let's cover some typical angling situations that can break rods and which are easily prevented by proper technique.



What Can Be Prevented

Accidents do happen. Tackle boxes get dropped on rods, car doors shut on them, weighted flies smash into them, kids step on them. There are a host of accidental causes behind many rod breakages and there's not much we can do to prevent them. Things happen, rods get broken. This will never change. But such accidental abuse may only account for a small portion of rod breakage. I have no numbers to back this up, but I feel fairly confident that at least half of all rod breakages are caused not by accidental impact or abuse, but by simple angler ignorance. I've seen too many fishermen use rods in a ways that were almost guaranteed to cause breakage. Poking lures off stumps with the rod tip, high sticking and high reaching, overlining, etc., are all causes of rod failure and yet they can all be prevented through customer education. Accidents are things we can't really control, but the latter, simple angler abuse, can be controlled with just a little insight. And this is one area that we can control somewhat, through customer education.

**No rods were harmed during the production of this article. Only low-modulus glass rods were used during the photographing of dangerous rod abuse.*

Shop Failures

Fishermen like to flex rods before buying. They shake, bend, wiggle and false cast any rod before they decide whether to purchase it or not. And many employ some strange and damaging techniques in so doing. Not so many years ago I had a fisherman tell me that he liked to "test" rods in the local discount stores in order to find out which ones were good and which ones were bad. He said he just picked up a rod off the rack, bent the tip around

until it reached the butt, and if it didn't break, he'd buy it. If it did break, and according to him lots of them did while undergoing his quality check, he just set it back in the rack as best he could and moved on to the next rod. According to him, the ones that broke had something wrong with them. The ones that held up were good rods and were the ones you wanted to choose from.

I once had a customer buy a rod from me and promptly break it right there in the shop! He was hand flexing it to show another fisherman "the action" and had pinched a spot about 12 inches back from the tip between his thumb and forefinger and tweaked it over. It snapped like a twig. According to him, it must have been defective, after all, he had never even made the first cast with it let alone fought a fish with it.

The trouble is, many fishermen don't even begin to realize there is a proper way to test or hand flex a rod. Done correctly, the rod or blank is in no danger. Done incorrectly, failure is a great possibility. Flexing a blank over its entire length does not put a rod in danger of breakage. Holding your palm against a rod tip and applying moderate pressure is not going to break a rod (1). Neither will pressing a rod tip into the ceiling or against the floor at a moderate angle.

Unfortunately, few fishermen flex rods with this much care or understanding. One of the most foolish things anyone can do to rod is to grasp it between thumb and forefinger and give it a sharp bend (2). I've seen dozens of rods and blanks snapped off by guys doing just this. Grasping the rod in this manner puts undue pressure and a very sharp bend into a very short area. Graphite in particular, does not like this. Unfortunately, most guys who break rods in this manner this never quite understand just what happened. The rod must have been defective, they reason. Actually, they broke the rod in just the same way as they'd



snap off the end of a dry twig. Make sure your customers don't do this to your in-house stock and make sure they understand that there is both a safe and an unsafe way to hand flex a blank.

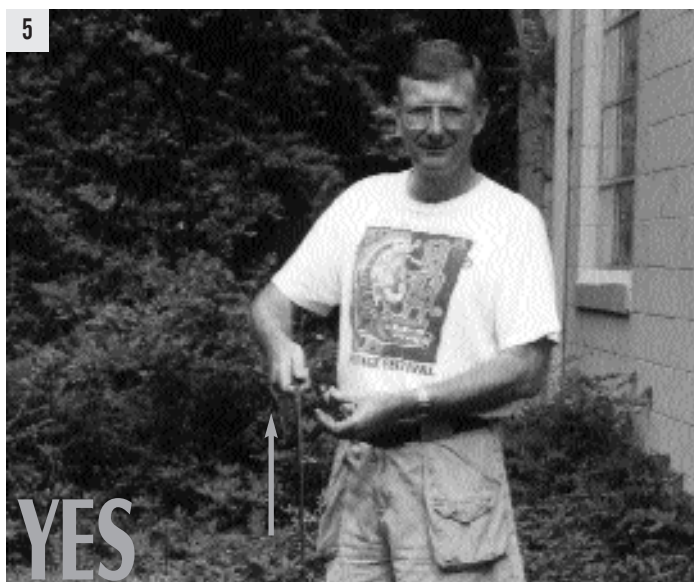
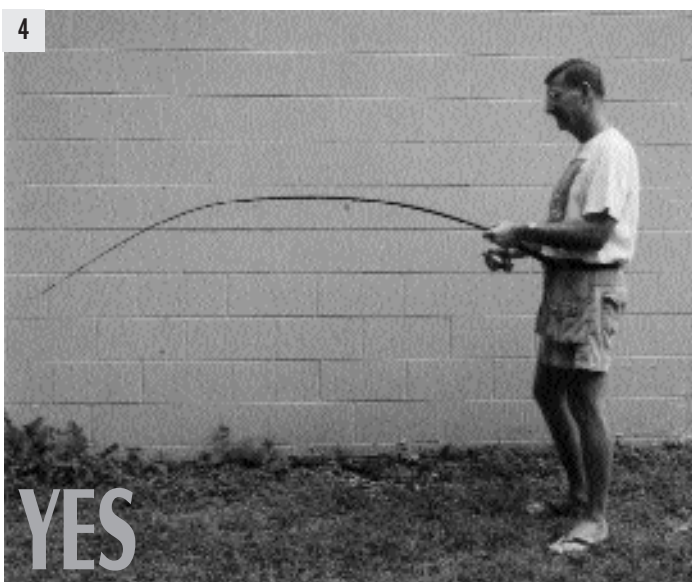
Fighting Pressure

The way most fishermen attempt to apply more pressure to a fish, or a snag, is by pulling back harder and farther on the rod. Of course, once you put more than about a 90 degree bend in a rod, no more pressure is actually brought to bear against the quarry. The rod is simply put in jeopardy (3). Your customers need to understand that there is a limit to the degree of flex a rod can withstand as well as a degree of flex that once exceeded, fails to put any more pressure on the fish or obstruction.

Ideally, the angler should utilize the most powerful section of the rod, which lies in the mid to butt areas. To do this, he should keep a taut line and apply power from a fairly low angle, say about 0 to 45 degrees from the water (4). Once the rod butt starts to move past 45 degrees, there is no longer any sense in continuing upwards with it. Instead, the angler drops the rod, recovering line with the reel, and begins another "pump," keeping the pressure on the fish by having the rod flexed deep into the mid and butt area. Simply pulling back farther and farther on the rod will not get the powerful mid and butt sections of the rod involved in the fight. You'll simply end up with what is depicted here in photo #3, which puts very little pressure on the fish. The power of any rod is in the mid and butt sections. Get your customer to use that power by starting each rod pump low and pulling on the fish with the lower mid and butt of the rod.

Here's another good way to apply maximum pressure to a fish - drop the rod so that it is pointed at the fish or obstruction. On a tight line, move the butt of the rod to the side, recovering line as quickly as it is gained. What you're attempting to do here is take the rod out of the equation entirely and employ what amounts to a tug of war against the fish or obstruction. The situation you create here is not at all unlike what you'd have if the rod didn't even exist - a situation where you're simply pulling against whatever is on the other end with the line alone. When using this method on a fish, however, you need to understand that without the rod there to cushion any sudden surges, you're likely to break light line or tippets unless your reel drag is properly set and functioning. Remember, this method takes the rod out of the equation to a large degree and your line is definitely the weak link in the chain.

If you're attempting to free a hopelessly snagged lure, or to break the line on such, you can simply put the rod directly in line with the obstruction and pull back on the line without moving the rod at all (5). On a baitcast-



ing reel, lock the spool with your thumb. On a spinning reel lock the spool by dropping your forefinger onto it or cupping it with one hand. On a fly reel, cup the reel and spool so nothing turns. Now pull straight back with the entire rod/reel assembly while keeping the rod straight. Do exercise care, however, as lures or sinkers that are freed this way can exit the water like a bullet!

The number of rods broken each year by fishermen attempting to free snagged lures would likely boggle the mind. This is one very important technique your customers need to know about. And while you're at it, remind them that lures and baits are generally less expensive than rods. If something is going to be lost or damaged, better a lure than a rod.

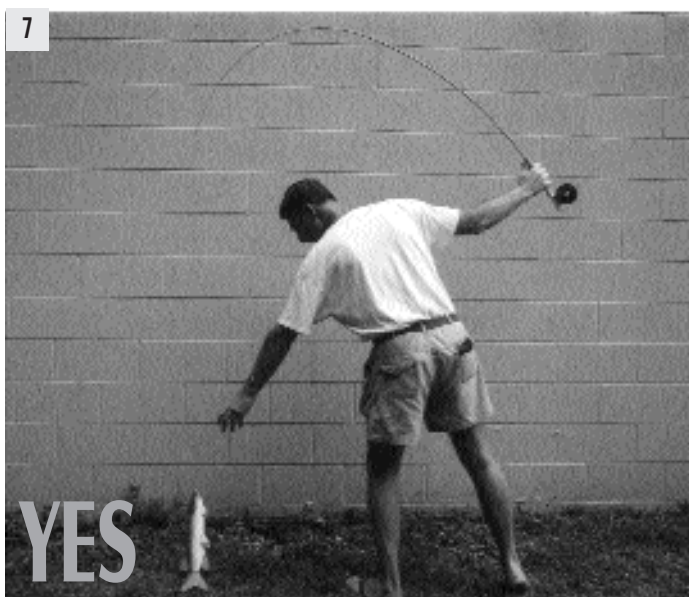
Landing Mistakes

One customer of mine was continually breaking his rods near the tip. Every rod I made for him came back broken about 4 to 12 inches back from the tip after only a few outings. One day after returning another broken rod to me in the shop, I asked him to go through the motion of landing a fish. His actions made the cause of his rod failures all too obvious.

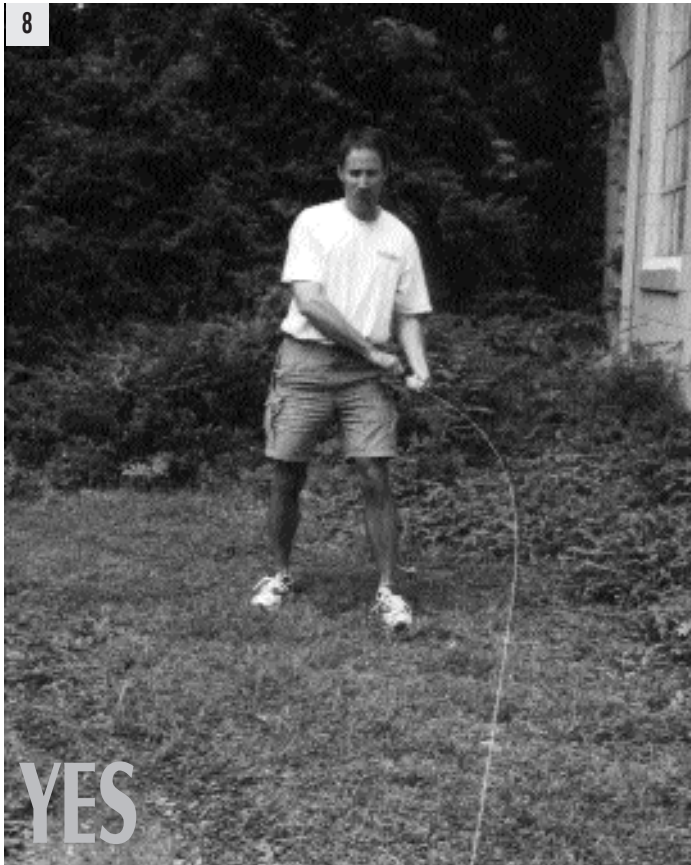
Bringing a fish in too close and then pointing the rod skyward when you attempt to land him, almost always results in the tip of the rod folding over into a 180 degree bend. Few rods will take this kind of abuse. Fly fishermen are particularly bad about doing this as their long rods make it impossible (or so they think) for them to get the darn fish close enough for them to land it. So they wind the fish up close and point the rod skyward, never looking up to see the horrendous bend they're putting in the rod. The bottom of the rod is pointing straight up, and the tip is pointing straight down (6). Failure is imminent.

Instruct your customer on the finer points of landing fish. Improper landing techniques are the undoing of many a rod. Always leave a length of line beyond the rod tip that is equal to, or greater than, your rod's overall length. That's right, with a 6 foot rod you want at least 6 feet of line past the rod tip when attempting to land a fish. With a 9 footer, keep at least 9 feet of line, if not a few feet more, past the rod tip. When landing a fish, turn your hand over and outward so that the rod tip is not flexed past 90 degrees (7). The fish will fall gently to hand, net or gaff without your rod being put in danger.

While I'm sure most of you already know this, your customers need to understand that using the rod to lift and swing any decent sized fish over the gunwale and into the boat is not good landing technique. I know the bass pros do it and get away with it a lot of the time. But if you're not fishing big money tournaments where you can afford to bust rods, you're better off using a much safer landing technique. Explain this to your customers.



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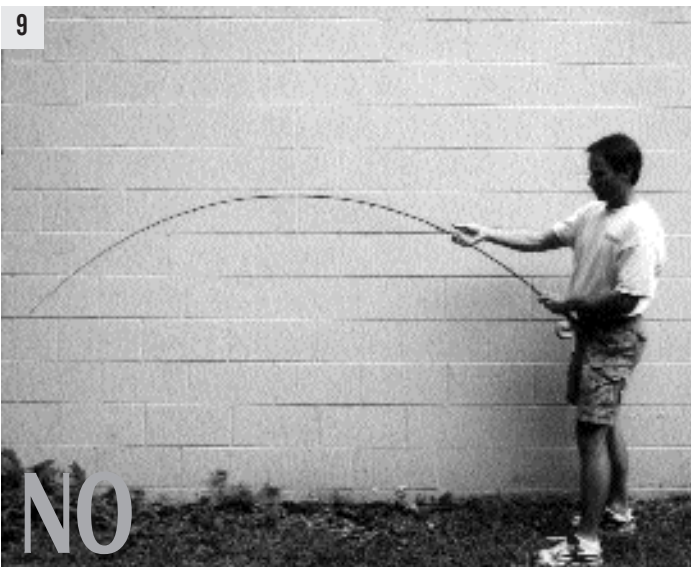
The Reel Is Not A Winch

Fishing reels are not winches. They're not made for direct retrieve against any sort of heavy load. Their purpose is to pay out line under pressure and to recover it when there is no pressure. I'm sure all of us have been in a boat with an angler who hooks a nice fish and then starts winding and cranking away. The rod tip bends over and past 90 degrees and the angler just winches away on the reel, keeping the rod up high and with a tight bend in it. This is often referred to as "high sticking," again pretty much what was depicted in photo #3. With spinning equipment, you'll often hear the spool clicking or whining as the angler simply slips the drag, rotating the spool around the spindle shaft, severely twisting the line but never actually gaining any!

I don't want to delve into the intricacies of reel drags and proper settings, other than to point out that a reel is not meant for winching in a fish. The rod moves the fish towards us and the reel simply takes up the slack line as the rod is dropped back down and readied for another pump. All the while, the rod is never brought back so far as to put more than a 90 degree bend in it. Depending on the line and reel drag setting, the rod can be flexed deeply into its power zone and efficient power is then brought to bear against the fish, hopefully moving him the direction you wish him to go. When rod flex begins to move past 90 degrees, it's time to lower it back towards the fish all the while using the reel to recover the gained line. Your customer should understand that this is not only the most effective way to fight a fish, but it does not pose any harm to his equipment.

One aside that I need to mention is that the tendency for most anglers is to move the fish by sweeping the rod upwards. Yet quite often, the easiest way to move the fish is to apply pressure from the side (8). For whatever reason, fish tend to resist the urge to be pulled upwards, but do not resist nearly as much to being pulled to the side. Try it some time and see for yourself.

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High Reaching

A rod is a lever. To the fisherman it's a third order lever and to the fish, its a second order lever. In both cases he (the fish) has the advantage over you in terms of power. If he's big enough and strong enough, the tendency when you tire or need to move the fish, is to reach up on the rod, shortening the lever and trying to reduce the fish's lever advantage (9). It's effective for sure, but its also tough on rods. All rods feature a progressive action and as the load on the rod increases, the rod flexes further and further down towards the butt into the beefiest and strongest part of the structure (at least if you keep recovering line and resist the temptation to simply aim the rod to the heavens and winch away).. If you've got

maximum pressure on a fish and you suddenly reach up and beyond that very strong part of the rod, isolating the much weaker mid or tip section with that same pressure, you're going to break it. Customers need to understand that they can still beat a fish quickly without endangering their rod.

The purpose of the fighting butt on fly rods, or longer handles on most casting and spinning rods, is so you can get the rod butt up under your forearm thereby taking pressure off your wrist and putting it on the whole of your arm and shoulder.

The tight-line sideways movement outlined earlier in this article is sometimes also a good practice in these situations. Take the rod out of the equation entirely. Remove the lever advantage the fish has on you and whip him in a tug of war. It's more effective and you won't break a rod doing it.

The Really Dumb Mistakes

I can't count the number of rods I've seen in the act of being broken and the entire time the event is taking place the fisherman is totally oblivious to what's going on. I've watched fly fishermen attempt to pull the line/leader connection through the guides only to have it catch or snag on a guide and stop. The fisherman keeps pulling on the fly end of the leader, effectively folding the tip of the rod over into a sharp arc. This is very similar to what I spoke of earlier when talking about landing a fish. Most line/leader connections can easily be shaken through the guides with a few short, false casting type motions, or by lowering the rod and wagging it from side to side. Make sure your fly fishing customers know how to do this.

Then you've got the surf fisherman who travels up and down the beach in his 4WD vehicle, rods stuck into his bumper mounted rod holders, hood and sinkers secured in one of the guide frames or rings. As bad as this is on the guides, it's pure torture on the rod blank. Those surf sinkers or metal lures tick, tap and slap the rod surface as the vehicle motors down the road or cruises the dunes. The fishermen stops and climbs out and loads up his next cast only to have the rod snap. Another defective rod, or so he thinks. If the sinker or lure has to beat and bang on anything, make it the handle, not the rod blank surface.

Watch fishermen as they attempt to get a too long rod into a car, truck or boat with a too small opening. They think that if they only double the rod up for just a second, they'll be okay. Often they're not. A few "words to the wise" with regard to these type errors can spare many a rod from breakage. Customers need to understand the ramifications that any sharp or sudden impact to the rod surface can have down the road. Rods that are subject to such abuse may not break at the time of the impact, but rather fail a little later leaving the fisherman to believe he did nothing to cause the break.

Fish Fighting Tips

- Never flex a rod by hand by pinching the rod between thumb and forefinger.
- When flexing a rod by hand, flex the blank over its full length, never just over a short area.
- Never put more than a 90 degree flex into a fishing rod either while fighting or landing a fish.
- A rod's power is concentrated in the lower mid and butt sections. Apply pressure against a fish by pulling with the lower mid and butt areas of the rod, keeping your lifting and pumping action from between just under 0 degrees and up to about 45 or 50 degrees (8 to 11 o'clock).
- When attempting to free your lure or fly from a snag or obstruction, point the rod directly at the obstruction and hold the reel spool so it cannot slip. Pull straight back against the snag and do not put any flex into the rod. Exercise care, as a freed lure or sinker can come at you like a bullet.
- Pay attention to the line you use on any rod. The line should always be the weak link in the chain, not the rod. Using a higher line test than recommended and applying maximum pressure with it can easily break a rod.
- Transport and store rods with a reasonable amount of care. Quality graphite rods are terribly strong but do not hold up well to bumps, bangs, scrapes and other types of impact or abrasion.

Conclusion

There are some things in fishing that you simply cannot control and that are going to break rods. But it only makes sense to at least try to offer some input on those things that either you or your customer can control. Most custom rod customers would prefer that their expensive new rod didn't break, and they are only too happy to try and prevent breakage by practicing safe and effective techniques. But they can't do that unless they know how. Here's one more chance for you, the custom rod builder, to impart some knowledge and extra value into each custom rod sale. And you just might be sparing yourself a future headache in the process! 📌

This article isn't intended to be a full treatise on fish fighting techniques, so forgive me if I've skimmed over any of the more important aspects that such a treatise would require. The purpose here has to been to offer you some basic instructional information which you can relay to your customers. The Volume 3 #1 issue of RodMaker contains much more technical details on rod breakage causes.