



**President's message**

**Sawfiler Education is Getting Really Good**

I have spoken at the Wood Machining Institute Seminar in Seattle and the Southern Saw Filers meeting in Monroe, La. in the last month. In both places I was very impressed by the other speakers and the attendees.

The speakers focus on delivering hard, immediately usable knowledge. There is also a greater understanding that the speakers are presenting from one side and that there is a need to take a speaker's knowledge and combine it the with knowledge and experience that filers have to get the best results.

The Wood Machining Institute had some of the best filers in the country. Ron Brown, Interfor Pacific; Roman Simshauser, Linden Door; Robert Sayen, Potlatch Forest Products; James Raines, Roseburg Forest Products; Randy Richardson, Roseburg Forest Products; Carl Vaughn, Roseburg Forest Products; Chris Smith, Swanson Superior; Tyler Bagge, Hull Forest Products; Dick Bernier, Hull Forest Products

The final event was a panel discussion with Al Bouchard of Weyerhaeuser. It was some of the very best filers exchanging ideas.

The SSFEA was very well attended with some excellent questions. Russell Hartley, as you would expect, was a very important contributor. Gerald O'Banner of GP, Leaf River also added some incredibly pertinent questions.

**The great filers all seem to have an ability to keep digging until they get to the heart of a problem.**

# Carbide Processors, Inc.

Northwest Research Institute, Inc.

Newsletter May, 2007

3847 S. Union Ave. Tacoma, WA. 98409 (800) 346-8274

sales@carbideprocessors.com [www.carbideprocessors.com](http://www.carbideprocessors.com)



**Cermet II®  
8 days  
instead of 5  
in MDF  
and cleaner cuts**

## Great Carbide Prices



**Buy these tips and you will be as happy as a cat on an invisible bike.**

CWB 7105 C-2	\$0.054
CWB 7105 C-3	\$0.054
CWD 7215 C-4	\$0.108
CWE 7165 C-4	\$0.096
CWE 7185 C-4	\$0.108
CWF 7120 C-1	\$0.120
CWF 7140 C-1	\$0.120
CWF 7200 C-3	\$0.228
CWF 7310 C-2	\$0.300
CWH 7150 C-3	\$0.102
Strob Strips 1" x .140 kerf	\$0.348
Strob Strips 1" x .160 kerf	\$0.408

CWB = .281" L x .078" T
CWD = .312" L x .095" T
CWE = .375" L x .095" T
CWF = .500" L x .125" T
CWH = .344" L x .125" T

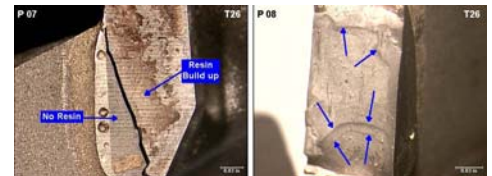
Top quality Carbide

Prices are really low because it was purchased a couple years ago when carbide was much cheaper.

## We Sell Carbide That Works Really, Really Well.

Inside we have the first part of a three part series on bad carbide. The customer was a nice, honest guy. He tells the truth and is trustworthy so he believed a carbide supplier who said he had good stuff, cheap. It just wasn't true. We managed to help the customer out but the bad carbide cost him a lot of money.

**See inside for an incredibly good saw failure analysis by Zane Lockhart of Multi Metals.**



### Chinese Carbide

Saying Chinese carbide is like saying Chicago food. There is bad food in Chicago and bad carbide in China. There is also true excellence in both places. If you really want to know about Chinese carbide contact Ron Mills at China Pacific Carbide (714) 692-8492 X 203 He can tell you how many hundreds of companies there are and how hard he has worked for many years to find the best and train them how to satisfy the US market.

**Remember to buy our carbide**



**and you will be as happy as a bear at a bird feeder. (A claim no other carbide supplier can make.)**

## The Truth about Cats and Dogs



From John Schultz of Super Thin Saws

### Excerpts from a Dog's Diary"

8:00 am - Dog food! My favorite thing!  
9:30 am - A car ride! My favorite thing!  
9:40 am - A walk in the park! My favorite thing!  
10:30am - Got rubbed and petted! My favorite thing!  
12:00pm - Lunch! My favorite thing!  
1:00 pm - Played in the yard! My favorite thing!  
3:00 pm - Wagged my tail! My favorite thing!  
5:00 pm - Milk bones! My favorite thing!  
7:00 pm - Got to play ball! My favorite thing!  
8:00 pm - Wow! Watched TV with the people! My favorite thing!  
11:00 pm - Sleeping on the bed! My favorite thing!

### "Excerpts from a Cat's Diary"

Day 983 of my captivity. My captors continue to taunt me with bizarre little dangling objects. They dine lavishly on fresh meat, while the other inmates and I are fed hash or some sort of dry nuggets. Although I make my contempt for the rations perfectly clear, I nevertheless must eat something in order to keep up my strength. The only thing that keeps me going is my dream of escape. In an attempt to disgust them, I once again vomit on the carpet.

Today I decapitated a mouse and dropped its headless body at their feet. I had hoped this would strike fear into their hearts, since it clearly demonstrates what I am capable of. However, they merely made condescending comments about what a "good little hunter" I am. Cretins!\* There was some sort of assembly of their accomplices tonight. I was placed in solitary confinement for the duration of the event. However, I could hear the noises and smell the food. I overheard that my confinement was due to the power of "allergies." I must learn what this means, and how to use it to my advantage.

Today I was almost successful in an attempt to assassinate one of my tormentors by weaving around his feet as he was walking. I must try this again tomorrow -- but at the top of the stairs. I am convinced that the other prisoners here are flunkies and snitches. The dog receives special privileges. He is regularly released - and seems to be more than willing to return. He is obviously retarded. The bird has got to be an informant. I observe him communicating with the guards regularly. I am certain that he reports my every move. My captors have arranged protective custody for him in an elevated cell, so he is safe. For now...



## Great Filter Units

For Straight oil, Synthetic and Water - based coolants.

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Great prices, pay for themselves readily, cleaner shops, less labor and longer diamond wheel life with better, faster grinds.

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Equipment Ltd at 800-533-2006

### Coolant filter Life

We recommend a filter change after one month in use on a single machine which is about 160 hours of use. In our tests we have seen them go 21 days of 20 hour shifts, which is 420 hours. Many folks get 2 or 3 months out of the filters which is 320 to 480 machine hours.

The rating is based on the amount of sludge generated by the machine in an hour. If you run a machine 40 hours and filter one hour then you remove all the sludge from the 40 hours of running.

If you are running 11 machines then you are getting 440 hours life out of the filters in a week.

Two things can happen. 1. If filters are run too long they can load up and releases over and over so they don't do any good past a certain point. It looks like they are working, however. This is like pouring fifty gallons of water in a five gallon bucket. It works because when you are though the 50 gallon drum is empty and the bucket is full. You just ignore the water on the ground. 2. After a long enough time there will be a lot of sub-micron particles in the coolant and this can give it a gray color.

We had a customer ask us if we could help them with a tip breakage problem. They were buying tips from us, from Multi Metals (where we also buy some of our tips) and from a Canadian importer of cheap Chinese carbide. We did a simple test, agreed with the customer and sent the saw blade on to Multi Metals. **The tips that broke were not ours and were not Multi Metals.** Multi Metals did the analysis as a favor to us and to the end user.

This was not a Multi Metals problem. All Multi Metals had to do was prove it was not their problem. Instead they went way beyond that. This report is an excellent example of how I think a supplier should respond when you have a problem.

**BOSCH**  **Robert Bosch Tool Co.**

**MULTI-METALS Division**

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**To:** XXXXXXXXXXXXXXXX  
**cc:** Tom Walz, Carbide Processors, Inc. Shawn Teague, PT-ACN, SAM-Lu-MM  
Dave Bell, PT-ACN, TEF-Lu-MM Franc Koljaka, PT-ACN, MFG-Lu-MM

**From:** Zane Lockhart, PT-ACN, ENG-Lu-MM  
**Date:** April 5, 2007  
**Subject:** Analysis of 10" Carbide-Tipped Saw Blade with Fractured Tips  
**Doc. No.:** MD-0128 **Proj. No.:** MP-0176

A 10" x 60-tooth, carbide-tipped circular saw blade was submitted by XXXXXXXXXXXXXXXXXXXX Analysis was requested to identify if possible the cause of several tooth fractures and missing teeth. The blade was reportedly used on a table saw to cut only a small quantity of walnut wood before the blade failed. Several of the broken tip pieces were recovered and submitted as well.

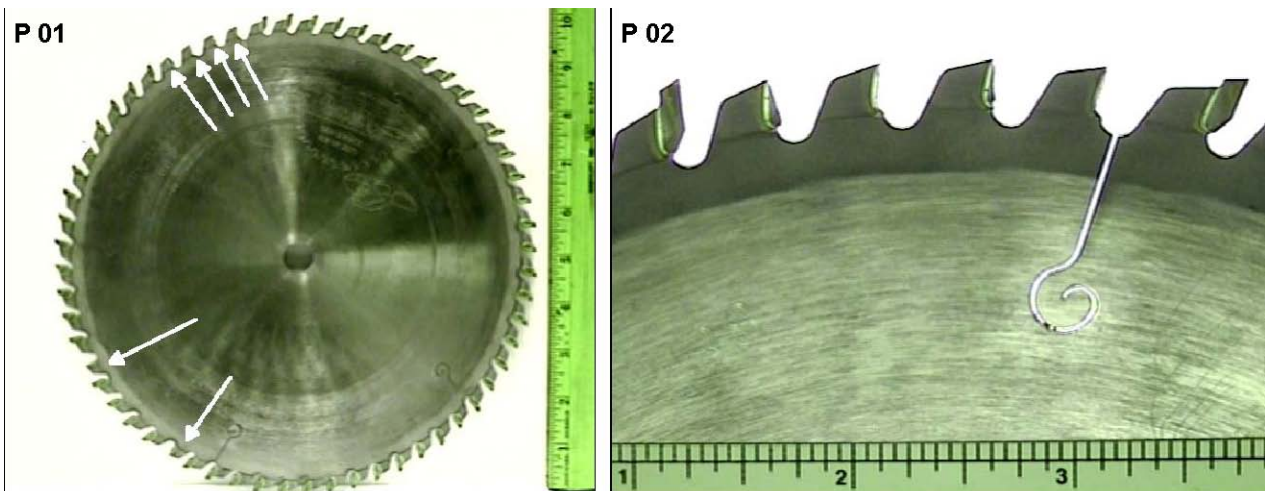


Photo 1 above left shows the condition of the as-submitted blade. At least six major fractures are identified by arrows. Photo 02 above right shows a bank of teeth including four consecutive failed tooth sections.

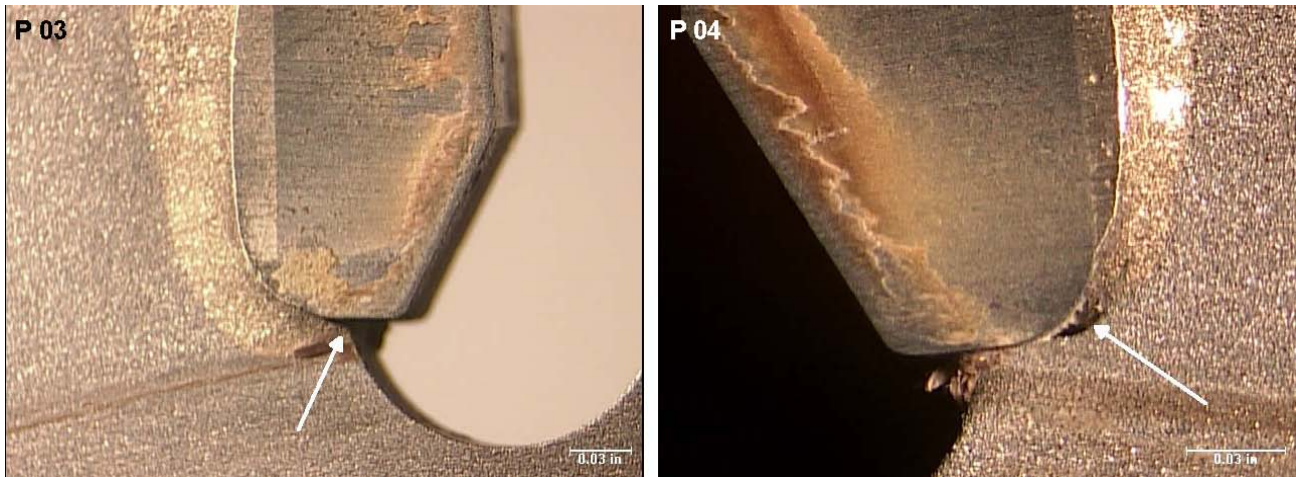
The blade was further identified as follows:

ITEM	DESCRIPTION
Type Blade	General Purpose
P/N	254GP060
Diameter	10 inch
No. of tips	60
Plate thickness	0.086 inch
Kerf thickness	0.130 inch
Arbor size	$\frac{5}{8}$ inch
Slots	4 laser-cut, hook type expansion slots
Tip style	ATB ground w/European chamfer

**Table 1: Saw Blade Description**

In addition, the carbide was identified as “C-4 micro-grain.” The face and sides were ground with 200-grit diamond, and the top with 400-grit diamond. Tip faces were finished with a 600-grit diamond grind. All grinding was performed with a water-based synthetic coolant. Tips were manually brazed with an oxy-acetylene torch.

## VISUAL EXAMINATION



Visual examination noted that tip bases were not fully supported. Photo 03 (12.5X) above left shows a typical tip base that is only partially supported. It was also noted that the brazed joints were very thin along the base sections and in some cases inadequate braze flow left voids and gaps as documented in Photo 04 (20X) above right.

In order to better identify specific tips, the teeth were individually marked with a number from 1 to 60, which will provide a reference point for the remainder of the report.

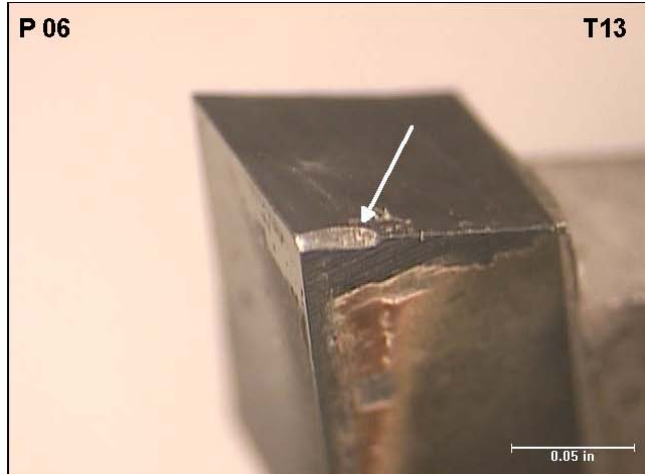
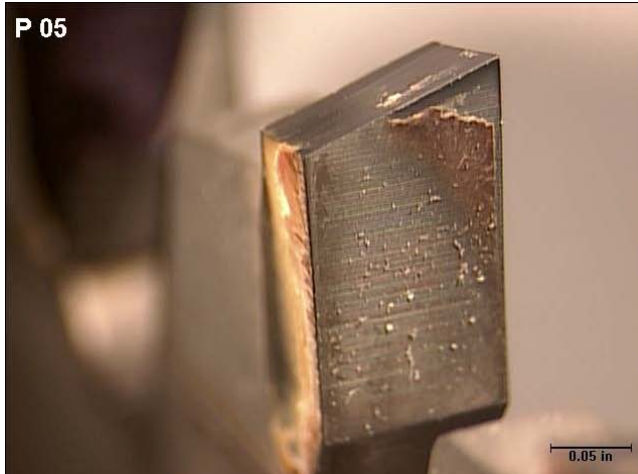


Photo 05 (10X) above left shows a typical ATB ground tooth from the blade. The tips are finely ground and exhibit sharp cutting edges with very little wear. This confirms that the blade had not been in use very long. In addition to the six major fractures, at least three tips (T13, T21, and T23) exhibited minor chipping to the corners similar to the side view shown in Photo 06 (25X) above right. These chips were all in the upper right corners of the ATB ground tips.

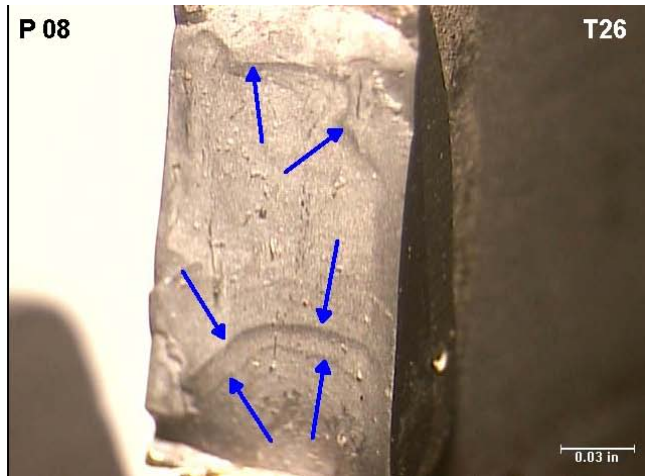
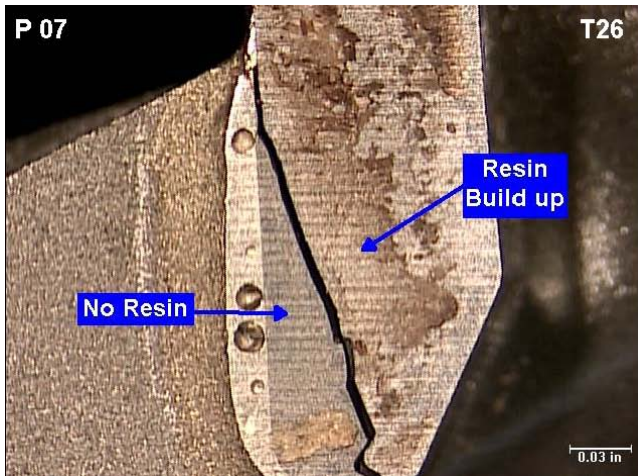
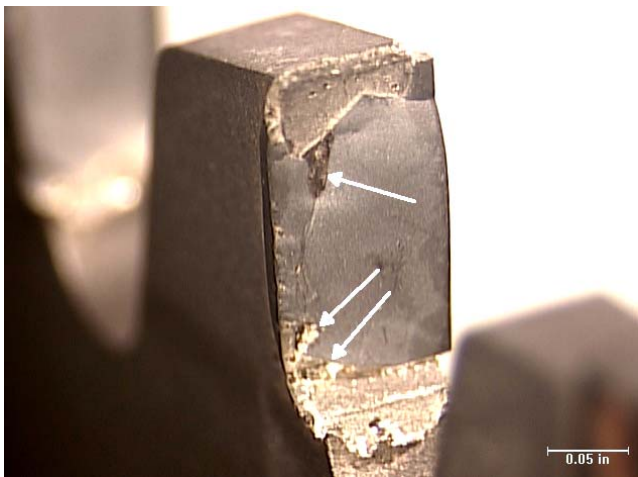
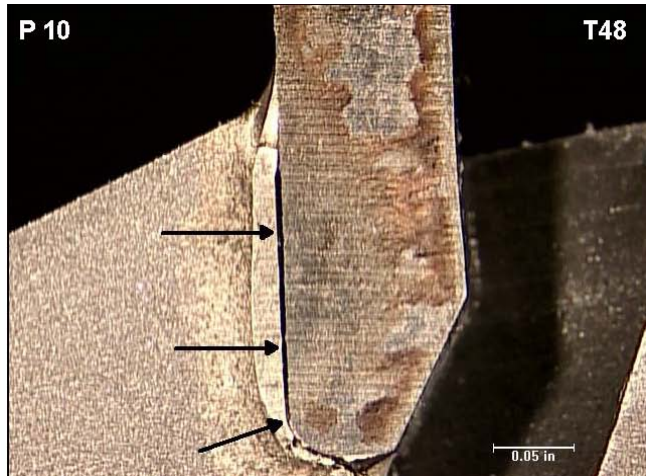
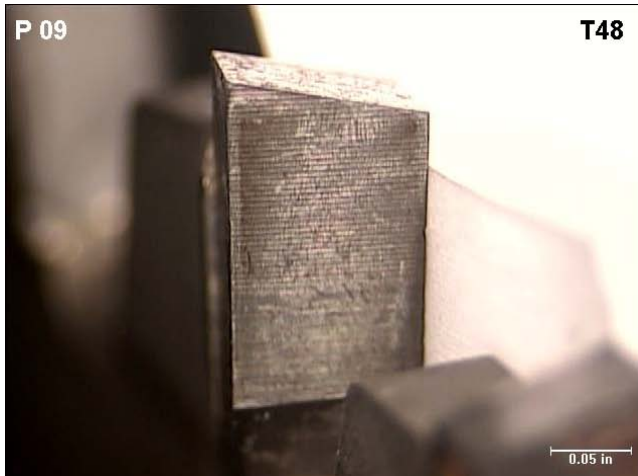
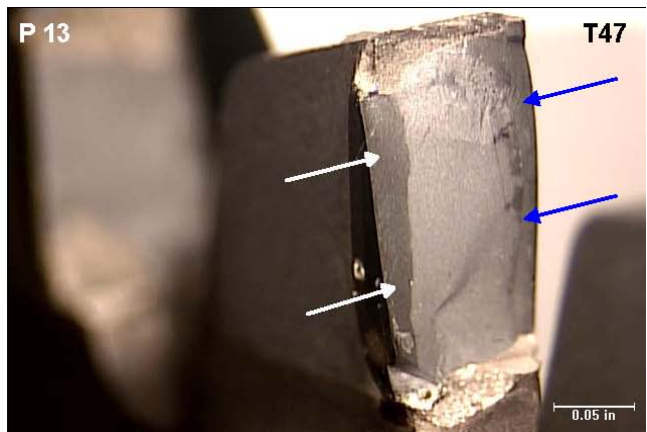
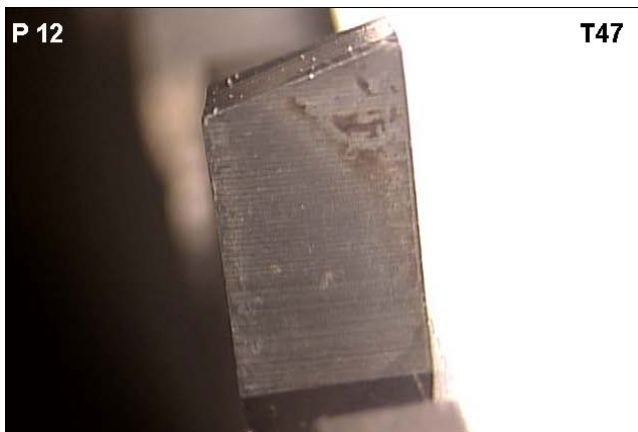


Photo 07 (25X) above left shows Tip #26, which was one of the major fractures. The tip is shown with its mating section. As seen in the photo, the resin build up is only visible on the front fractured section. This strongly suggests that the tip was fractured prior to cutting. The slight offset of the fracture prevented resin build up on the rear half of the fracture. Photo 08 (25X) above right shows the internal fractured carbide surface. Close examination shows stains on the lower half and the upper portion of the tip (see arrows). These stains were likely left by the coolant, which indicates that tip probably fractured during grinding. Capillary action then attracted the coolant into the crack.



Tip #48 was another fractured tooth section. Photo 09 (10X) above left shows the tip with the recovered fractured face in place. As seen, there is no chipping, cracks, or other visible evidence of an impact to the front of the tooth. When viewed from the side, as shown in Photo 10 (10X) above right, it is clear that the tooth failed along the carbide/brazed joint interface. The fractured condition strongly suggests that the tip failed from a force pushing the tip from the rear to the front, such as applied during grinding. Photo 11 (10X) at left shows the internal fracture. Only a thin remnant of carbide remains bonded to the back of the seat. The fracture also shows some large gas pockets and poorly bonded areas (see arrows) that may have weakened the joint and contributed to the tooth

fracture.



Like previous tips, Tip #47 failed primarily along the carbide-brazed joint interface. Photo 12 (10X) above left shows the tip with the recovered face in place. Tip 47 shows no sign of a significant impact to the face or sides. Photo 13 (10X) above right shows the internal fracture. As with the previous fractures, the dark stains along the left and right sides (see arrows) was likely stained by dried coolant, which indicates the tip fractured prior to sawing.

**This is part one of a three part report.  
To get the whole report just call us at 800 346-8274**

# Navy Safety Photos

<http://safetycenter.navy.mil/photo/archive/>



**Spray can in hot car – blew up and blew out rear window**





**Not only pretty faces but also great customer service**

Here are Jackie and Emily, who are always perky and always happy to help customers. Their job is to help people find carbide, silver solder, filter systems and everything else we sell. If we can't supply you but we know who can we will refer you. No matter what you want we will work really hard to find it.

**Inside – The Truth About Cats and Dogs P. 2**



**We have great tips and great pretinning.**

This is good pretinning. It is ours and it is what you should be buying. Demand it (well, ask for it, anyway) wherever you buy carbide. If they won't ship to us we'll get it for you direct and save you time and money.

**Carbide grades are like lumber**

There are different kinds of lumber. If you are reading this you probably know that. You also probably know the differences in many of them. You also know that each stand of trees is unique and each tree and each board is unique.

**Carbide is like that as well.**

There is special carbide for corrosion, for MDF, for beetle killed Lodge Pole (Lodgepole in Canada) pine. If you are still using a common carbide can pretty well double triple or do much better than that for you.

**Do you want \$3,008.50?**



We are paying \$5.50 per pound for scrap carbide. We wrote a check in January for \$3,008.50 to a filer for scrap carbide. He called originally and he knew he had some. He had no idea he had that much carbide or that it was worth that much money.

**Portable Rockwell Tester**



Mike West of Cascade Hardwoods bought this because John Gammelgard of Weyerhaeuser recommended it. Mike West says "We got a dandy little CLARK model CPT. It was \$1800. It's easy to use, comes in a nice hard case." From SUN-TEC Corporation (248) 669-3100 info@sunteccorp.com

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