



### President's Message

Tom Walz, Editor & Emily Erskine

### Help Wanted

#### Hammer man for circular saws.

Year round work at Nordic Saw & Tool in California 800.345.3535

This is on the front page because it is a big problem many places and is going to get worse. Ask yourself, if you were a hammer person would you want your son to go into the business. At one of my speeches lately I met an old friend who just had his third mill closed under him. This guy is good but he thinks he will take early retirement and do something else.

One small solution is saw tips that stay sharper longer. Our Cermet 2 tips last 2, 3, 5, up to 10 times as long as carbide. If you service saws for others remember that you can probably charge about twice as much for a saw that runs five times as long.

### Why Terry Payne got a great deal

We had a large quantity of special tips we bought surplus. (See p.2) We started sending out fliers advertising half inch tips for \$0.10 each. Terry Payne got back right away and offered to take them all at a lower price. We said sure because Terry is absolutely honest. He has a well deserved reputation for keeping his word. He pays in full and the checks arrive on time or early.

On the other hand we just lost a famous name customer. We got so tired having to fight to get paid that we doubled our prices and asked for a third up front.

We know the laws and we treat our customers equally however one of the classes we use is whether they pay on time or not. You may think you are being clever by paying late but there are also advantages to being honest.

# Carbide Processors, Inc.

Northwest Research Institute, Inc.

Newsletter September, 2007

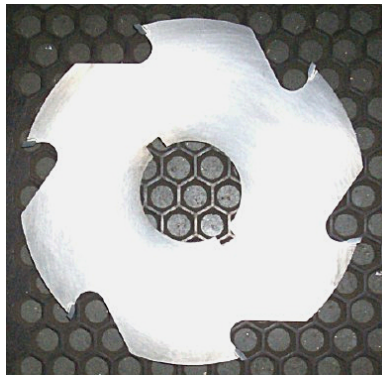
3847 S. Union Ave. Tacoma, WA. 98409 (800) 346-8274

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

### Cermet 2© Tips

3- 4 times the life in Corian©

4 – 6 times the life in MDF



### Long Life Pallet Saw Blades

Mike Goodpasture at Fabrication Specialties in Centerville, TN was looking for longer life out of his saw blades.

He is now getting at least twice the life he was before he started using saws from Murphy Saw Shop in Redmond, OR. He is using asymmetrical saw blades to control vibration. Long life is achieved by using Cermet 2 tips from Carbide Processors, Inc, in Tacoma, WA. The specially cut saw plate is supplied by Peerless Saw Co. in Groveport Ohio (800 973-3753). The saw blades are built at Murphy Saw in Redmond, Oregon (541-548-2515) by Monte Murphy and Steve McCall.

### Cermet 2 in Melamine

This is the best cutting blade he has ever used. The customer is cutting pallets of Melamine, about 25-30 sheets per pallet. The normal standard grade blades he uses cuts about 1 pallet before it needs to be resharpened. With our 10 x 80 Cermet II blade, he finished 3 plus pallets before the blade needed to be resharpened.

### Truly Great Brazing Video

How to braze pretinned tips. free on line at <http://www.tools-woodworking.com/video.html> or We can sell you a CD, DVD or VHS tape for \$20.00 if you wish.

### New, Improved Filter System For Straight Oil



Two Bag filter system for straight oil means good cleaning and high flow for only \$985.00

CP2002 Double Bag Wall Mount Unit with first pass through 25 micron filter bag and second through a 5 micron filter bag, both vessels drain at the bottom.

Customer tried to run the 10" dual glass element but preferred to run the bags, due to the lack of flow he was getting with the element cartridge.

He's been running 2 filter bags for approx 2-3 weeks at this point and is happy with the way the unit is working and is ordering more units.

Picture is of the regular 2002 wall mount. The new unit looks the same but has two drain plugs.

### Call Jackie to order.

This is a big deal because it is the first time Jackie has helped a customer design a custom unit. Jackie is a sweetheart and really, really wants to do everything right. Designing this unit got her well out of her comfort zone but, by golly, she did it.



**MVP Sharpeners and Cook's Sharpening Service Merge** to Provide our Customers with Greater Value, and Increased Capabilities. 800-594-4494 Email Contact: Tim Cook at [tim@cooksharpening.com](mailto:tim@cooksharpening.com) Austin Williams at [Austin@mvpsharpeners.com](mailto:Austin@mvpsharpeners.com)

## Tip Sale

We have 1,500 WE 7265 RH C2 tips with pretin, 5,300 WB 7180 C3 and 6,000 WXC 7215. We are asking \$0.10 each tip and we can ship them immediately!!

## Save Money on Shipping

We had a really nice guy come by from a company called Unishippers. We are now using them for some shipping and it is working well.

Our guy is Niko Nunogawa, Sales consultant, Unishippers of Tacoma 253-347-0114 Here is his explanation of the company.

The Unishippers concept is simple - major shipping carriers such as DHL, Roadway and BAX Global handle the pick-up, transportation and delivery of customer's shipments, while Unishippers provides local customer service and support. By leveraging the combined shipping volume of all its customers, Unishippers gets deeply discounted rates from its carriers, resulting in lower shipping costs for customers. Over the past 20 years, this incredibly successful concept has propelled Unishippers to become the largest reseller of shipping services in the U.S., serving more than 80,000 small to medium-sized businesses, moving nearly 1 million shipments per month and operating in 265 franchise areas nationwide.

Unishippers has strong partnerships with dozens of carriers and offers a wide variety of products, including domestic express, international express, ground, bulk mail and ocean shipping, as well as both LTL and full-truckload freight shipping. DHL, the company's small parcel shipment provider, has made significant investments in its infrastructure, resulting in service parity with UPS and FedEx in terms of reliability and on-time delivery. In addition, the company's core group of freight carriers continues to expand, giving customers even more choices when determining the best way to ship.

**WOW, That Cermet 2 is Great Stuff**

## Braze Training Seminars.

Lucas-Milhaupt, Inc. is now running regional brazing training seminar The next one is September 18 - 20, 2007 at the Crowne Plaza, Cleveland City Centre Hotel, Cleveland, OH.

Call Linda Brooks, Marketing Assistant for other dates. 800.558.3856  
lbrooks@lucasmilhaupt.com

**MVP Sharpeners and Cook's Sharpening Service Merge** to Provide our Customers with Greater Value, and Increased Capabilities.

(July 25, 2007) Van Austin Williams, owner of MVP Sharpeners in Cypress, Texas and Tim Cook, owner of Cook's Sharpening Service in San Marcos, Texas are pleased to announce our company's merger effective immediately.

MVP Sharpeners and Cook's Sharpening Service will collectively do business under Cook Industrial Tool, Inc. The company will briefly be located at 1214 Northpoint Dr. San Marcos, Texas 78666 until our new 5000 sq. ft. facility is completed in New Braunfels, Texas sometime in August 2007. "I look forward to personally meeting each of Austin's customers in the coming weeks", says Tim "and establishing some long term business relationships."

For more information visit our websites at: [www.mvpsharpeners.com](http://www.mvpsharpeners.com) and [www.cookssharpennig.com](http://www.cookssharpennig.com). Email Contact: Tim Cook at [tim@cookssharpennig.com](mailto:tim@cookssharpennig.com)

Austin Williams at [Austin@mvpsharpeners.com](mailto:Austin@mvpsharpeners.com)  
Phone: 800-594-4494



**NORDIC** INC.  
SAW & TOOL MANUFACTURERS  
*Engineered Carbide Cutting Tools & Saw Blades*

## Hammer man for circular saws.

Year round work at California Saw Blade Manufacturer.

Contact: Dewey Larson at Nordic Saw & Ttool  
2114 Divanian Dr.  
P.O. Box 1128  
Turlock, CA 95381-1128  
209.634.9015  
1.800.345.3535  
Fax 209.634.9010  
Email [info@nordicsaw.com](mailto:info@nordicsaw.com)

## Machinery for Sale

From time to time Royce//Ayr puts up excess machinery for sale. At the moment we are selling a Lach M1050C Erosion machine for diamond tools.

A Saturn HKS 600 router bit grinder and a CUTTERMASTER end mill and tool grinder. For pictures and details please go to our web site [www.royceayr.com](http://www.royceayr.com) and click on the side bar "machinery for sale".

Thank you, Gene Veening, Pres.  
ROYCE//AYR Cutting Tools Inc.  
Phone: (800) 959-5641(x 235)  
E-mail: [gveening@royceayr.com](mailto:gveening@royceayr.com)  
[www.royceayr.com](http://www.royceayr.com)

## Kennametal Changes Grades

We no longer make K3030 which was just like K3109 but with less expensive raw materials, cobalt 12.2% and hardness of 88.0 HRA. We now make K3030C, a grade that we can manufacture in our Victoria plant. K3030C has 11.4% cobalt and a hardness of 88.5 HRA. It is very similar to K3109 12.1% cobalt and 88.0 HRA, but K3030C is a less expensive powder.

Dave Vale  
Applications Engineer  
Kennametal Inc.

**We also have V- back tips on sale for \$1.00 each with or with out shim – while supplies last.**



## ST 660 Infrared Thermometer

A pretty good deal especially for the price.

We bought this because we figured we couldn't go wrong for under \$100. We like it and asked Mike West of Cascade Hardwoods to test it in a saw mill.



Infrared, Non-contact thermometer designed with an extra wide temperature range  
-50 ~ 999 °C (-58 ~ 1830° F )

Long time measuring reliability  
Laser sighting On / Off is switchable  
Backlit LCD display  
F or C selectable  
Electronic trigger lock  
Temperature data storage  
Audible alarms  
Case Included

Tom,  
Thanks for letting us play with that infrared thermometer. We have a more expensive unit here on the plant site that I borrow from the maintenance department when I need to but it was nice to have one at my disposal.

One item that came up that I used it on was one of our gang saw lube system water boost pumps. When they start to go out they get real warm. How warm I'm not sure but they get warm.



I have four of these systems in use and I noticed that the daily pressure reading was low for a few consecutive days. I took the thermometer out to that machine to check the temperature against the other similar pumps. It was actually cooler than the other ones so I looked elsewhere. I discovered that the water flow was higher than normal and that my flow meter was off. Flow goes up, pressure goes down. I have never used the thermometer to check these pumps but I will now. The pumps are mounted up on the panel so the gun is an ideal way to check them.



(Aimed directly at reflective babbitt surface)

Another thing I used it for was to double-check our IR thermostat on our large babbitt pot and to check the babbitt temperature on our small pot.

One thing we discovered when we developed the thermostat was that the infrared sensor does not work accurately on a reflective surface. We had to aim the beam at the crucible just above the babbitt level and not directly at the babbitt.



(Aimed at wall just above Babbitt surface.) There is a bright red dot from the laser that doesn't show up very well here.

We also played with the thermometer on welds and on our stellite tip annealer to see if it had any practical use there. I think that with more time to play with it we would come up with a holder of some kind, possibly magnetic, that we could use without having to hold it still. Once we found the right temperature we could use it for testing and calibrating our annealing times.



One of the most important uses my research assistant and I found was checking to make sure our backyard experiment had desirable results. By occasionally checking the temperature of our experiment we were able to achieve the desired results consistently.



Thanks again,

Our testing facility is always at your disposal.

# Super "C" Carbide Grade

Tougher than C1 - Better wear than C3

## What Makes Super C Tips Truly Superior

1. Superior Abrasion Resistance - Abrasion or straight wear is countered by smaller, better grain size.
- 2 & 3. Superior Adhesion and Diffusion Resistance (corrosion and chemical attack) Super C grade of carbide has an extremely fine structure so there is very little binder presented to the material being cut. This, combined with the special metallurgical formulation the Super C binder (hint - it's not just plain Cobalt) creates an extremely wear and corrosion material for use in wood, plastic or non-ferrous metals.
4. Superior Fatigue Resistance

**And People Really Like Them - Call Today To Try Them - Most Sizes Readily Available**

Super C	Hardness (HRA)	T.R.S. (psi)
	92.2 - 92.4	530,000 +

### Typical C2 values

	Hardness (HRA)	T.R.S. (psi)
C2	92.1	334,000
C2	91.8	334,000
C2	91.5	377,000
C2	90.4	435,000

### Typical C Values

	Hardness	T.R.S. (psi)
C1	89 - 92.4	350,000 - 360,000
C2	91.2 - 92.9	250,000 - 400,000
C3	91.4 - 93.6	270,000 - 350,000
C4	89.6 - 93	260,000 - 450,000

### Sawmill Grade Tips

- Transverse rupture strength well above 500,000 psi.
- Rockwell A hardness above 92
- Alloy binder for corrosion resistance
- Grain structure to inhibit both crack initiation and crack propagation
- Micro grain or mixed grain for superior wear

**Carbide Processors, Inc.**  
**800 346-8274**



**Cermet II®**  
**8 days**  
**instead of 5**  
**in MDF**

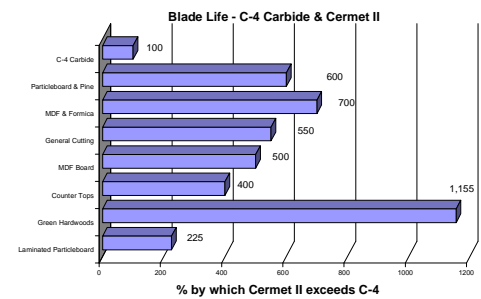
**Three weeks and three full loads of double side melamine laminate instead of 1 week and 1 load with carbide**

1. 5 blades with standard C-4 carbide cutting 45 lb. single and double sided vinyl-laminated particle board  
\* Cermet II - 15,088 meters / old grade - 6706 meters **225% as much run life**
2. KM-16 industrial saw cutting 101.6 mm x 152.4 mm (4" x 6") Green hardwoods, oak, hickory, maple and walnut using 11 blades with standard C-4 carbide  
\* Cermet II / 462 hrs / old grade - 40 hrs **1,155% as much run life**
3. 406 mm (16") 100 teeth cutting countertops  
\* Cermet II - 4 weeks / old grade - 1 week (4 times) **400% as much run life**
4. 406 mm (16") 80 teeth cutting MDF Board  
\* Cermet II - 10 days / old grade - 2 days (5 times) **500% as much run life**

5. 305 mm (12") 100 teeth TCG Miter cutting oak, Compressed Fiber Board, Plastic  
\* Cermet II - 154 hrs / old grade - 28 hrs (5.5 times) **550% as much run life**
6. 305 mm (12") 60 teeth cutting MDF, High Pressure Laminate (Formica)  
\* Cermet II - 56 hrs / old grade - 8 hrs (7 times) **700% as much run life**

7. G 1060A on Chop Saw cutting Particle Board and Pine Dowel Rods  
\* Cermet II - 48 hrs / old grade - 8 hrs (6 times) **600% as much run life**

**Use Cermet 2 instead of carbide and make your life much easier**



## Cermet II® Successes

Several times the life in a window and door plant.

3 times the life in Corian.

8 days instead of 5 in MDF and we have an even better grade coming.

Twice the life in beetle killed Lodge Pole pine.

### Benefits You Get

- \* Grinds like regular carbide
- \* Gives a better edge than carbide
- \* Stays sharper longer than carbide
- \* Great increase in fracture toughness.
- \* More corrosion-resistant
- \* Better at high temperatures
- \* Cuts faster
- \* Cuts faster & longer yet is tougher
- \* Longer runs and less downtime.

## Report from Marvin Windows

On the saw that we tried. How many times we sharpen a blade before we order new or have retipped we are not sure. Most blades get damaged by hitting something so we have the carbides retipped a lot. How often do regular blades have to be sharpened? We normally have our carbide tipped blades sharpened every week.

The new Cement II blade normally last twice as long before it gets damaged. The best so far is four weeks and one and a half million cuts before we changed it out which is four times longer.

Hope this helps and keep up the good work on those tips.

Nathan Hull, Grinderman  
Marvin Wood Products

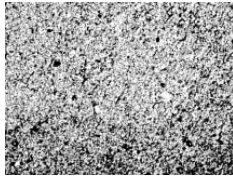


## Purified Flux

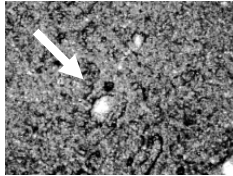
30% To 100% Better  
Braze Joints  
(50x magnification)



Purified flux  
Smooth &  
consistent



Standard flux  
Large grains of  
foreign material



**You can see and feel the difference immediately.**

Purified flux is black flux that has had extra processing steps. These processing steps take the black article out and leave the flux a rich, creamy brown color. If you take a little of each flux and rub it between your fingers you can feel that Purified Flux is not only smoother but the particles are smaller and there are no extra large particles.

Flux is made to prevent oxygen from getting to the parts as they are heated. Steel and especially tungsten carbide oxidize at room temperature. The hotter they get the more they oxidize. Above 1,000 F tungsten carbide oxidizes extremely rapidly and forms an unbrazable surface. Purified flux is good for more time at higher temperatures, up to 1,700 F.

The original idea with flux was that it was to be applied on top of the braze area. However the critical part of saw and tool brazing is what goes on inside the braze joint. Ordinary flux is inexpensively made and has up to 10% odd size particles and non-active minerals in it. These odd size particles and non-active minerals get lodged in the braze area and can seriously effect the strength of the braze joint.

**Purified flux is cleaner, smoother, creamier and much more effective.**

5 # jars

Case (6 jars @ 5#) \$ 464.31

Single jar \$ 87.39

## Braze Alloys (Silver Solders)

The right braze alloy can make a huge difference in performance

Braze Alloy Impact & Bond Strength Tests	
<b>High Impact</b>	<b>100%</b>
S50N - 50% Silver with Cadmium	100%
A50N - 50% Silver - Cadmium free	75%
A56T - 56% Silver with Tin	0%
S50N - 50% Silver with Cadmium	100%
A50N - 50% Silver - Cadmium free	64%
A50N with copper spheres added	67%

### Stop tip Loss - Prevent Carbide Breakage

Saw tips are brazed onto a steel saw using braze alloy. When a tungsten carbide saw tip breaks it is usually bad carbide, the wrong grade of carbide, the wrong braze alloy or a combination of these.

The brazing process forms a three part composite. The success of the composite depends on the tungsten carbide, the steel, the braze alloy and the way it is all put together. The braze alloy has to do three things. 1. It has to keep the tip on the saw. 2. It has to cushion the tip because the tip suffers a lot of impact stress when the saw cuts. 3. It has to compensate for the difference in expansion between steel and tungsten carbide as they are heated and cooled during brazing.

## Buy Our Books

Buy online or call 800 346-8274

1. Carbide Saw Specification Manual  
<http://www.cafepress.com/sawspecs.80466877>

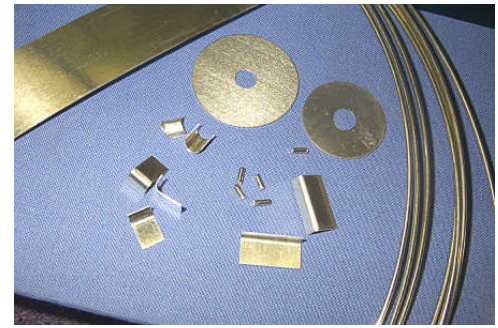
2. Carbide Saw Manual - Lowell freeborn  
<http://www.cafepress.com/freebornmanual.80464996>

3. Managing Coolants from Machining and Grinding Operations  
<http://www.cafepress.com/managecoolants.80458178>

4. Building Superior Brazed Tools  
<http://www.cafepress.com/superiortools.93943435>

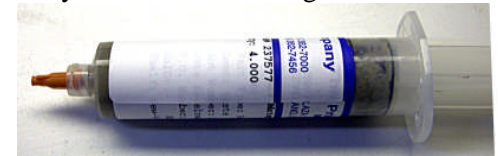
5. Chisels on a Wheel by Jim Effner  
<http://www.cafepress.com/chisels.90813670>

6. Braze Failure Analysis  
<http://www.cafepress.com/brazefailure.79434854>



We sell braze alloys (also called silver solders, high temperature silver solders, or braze filler metals.)

We supply the finest information in the world on the selection and use of braze alloys for carbide brazing.



### The Finest, Most Consistent Braze Alloys For Tungsten Carbide

- ☐ 26 Different braze Alloys
- ☐ All AWS approved
- ☐ All inspected to parts per million
- ☐ All alloys exceed AWS specifications
- ☐ Cadmium free
- ☐ With Cadmium
- ☐ Hi Impact – developed for Weyerhaeuser
- ☐ Ultra Hi Strength – High Temp.
- ☐ Low Silver – Very High Strength
- ☐ Low Temp. with high strength
- ☐ Wire – all diameters
- ☐ Ribbon - all sizes
- ☐ Sandwich alloy ribbon
- ☐ Brazing preforms

### Why Quality Makes A Difference

(American Welding Society AWS 5.8) Braze alloy can be within AWS specifications but it can vary in brazing temperature by as much as twenty degrees. This means that you can have cold joints and tip one end or zinc loss and more broken tungsten carbide tips at the other end.

Our braze alloy is accurate and measured within parts per million. It is typically four times better than it has to be or more according to government certified analysis. It brazes the same way every time.

## Filtering Straight Oil Coolants



We now have a filter system that filters straight oil coolants. Above is our CP 2020 which filters tight oil coolant very well. It is also available as a wall mount unit.



Here is our CP 2002, which has been an extremely good unit on water based coolants for about eight years.

We have tried it on straight oil with very poor results. It filtered for maybe an hour before it plugged up.

Oil is much thicker than water. The filters were good enough to filter the oil for awhile but, as soon as they started to load up with dirt, the oil was too thick to get through.



Here are the two units side by side.

A filter is a series of holes that separates particles from liquid. Oil is thicker than water so it is harder to filter out small particles. In addition oil transfers the pressure from the pump directly to the filter and is much more likely to collapse a filter element.

The secret is a high-tech filter. This is stainless steel inside and outside to handle the pressure. It is smaller than our water filters and has a pleated surface to provide sensational filter surface area at the high pressures oil creates.



We recommend monthly filter changes but many go much longer than that.

## Great Filter Units

For Straight oil, Synthetic and Water - based coolants.

**Really popular – We're selling a bunch of them**



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

**Now accepting Visa & MasterCard**

Call Us at 800 346-8274 or  
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.



## Military Humor

### Some of the stuff they find funny

(Editor's note: My nephew was back on leave from Iraq last month. I may have accidentally mentioned this to a couple dozen people. I passed on your best wishes and thanks to him. It embarrassed him a bit but he said that it was important to him and his battle buddies to know they were appreciated. Thanks to all of you. Tom)



Naval recruiters never have pictures of ships covered in snow in their offices



There are few of life's problems that can't be solved with the proper application of a high speed projectile



The Australians reboarded their vessel, aimed their machine guns at the Iranians and warned them to back off in what was said to be "highly colorful language".



Proof that in a cruel and uncertain world even a marine can find happiness.



If, at first you don't succeed, call in an air strike.



When there is hard work to be done you can always find someone to supervise



You go war with army you have, not the army you wish for



Jump School

Week 1:

Separate the men from the boys

Week 2:

Separate the men from the fools

Week 3:

The fools jump



You never go when you'll get to go boating at government expense again.

### Special for my Insurance Agent

Tom, the addition went really well. We had a few problems but got them worked out.



We lost the cap for the furnace vent but we had an old Rubbermaid garbage can lid that is working well.



We were able to fix that broken roof beam with duct tape and it is holding well.



Finally, we didn't have to raise the chimney after all. My daughter's bedroom is on the other side and she said it makes it nice and warm. We gave her a bucket of water for the sparks.

Well, that's it. Thanks to Mike West and John Schultz as usual. Remember to keep a chicken on your head and your boots on the ground and you'll do all right.



**Carbide Processors, Inc.**  
**Northwest Research Institute, Inc.**  
**3847 S. Union Ave.**  
**Tacoma, WA. 98409**



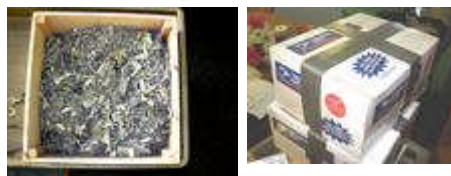
**Not only pretty faces but also  
 great customer service  
 800 346 - 8274**

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.



**You'll really like Cermet II Tips**

**Call & sell scrap - 800 346-874-**



**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.

**We are also able to buy scrap  
 Stellite®**

50 pound min. \$ 6.00 per pound

**This is good  
 pretinning.** It  
 is ours and it is  
 what you should  
 be getting.



**Apollo 11**

Showing second stage ignition and separation. Just a really cool picture.

**Typical Sharpness By Material**



Cermets 3 -4 micron radius, PCD (Poly Crystalline Diamond) 4 -6 micron, Micrograin carbide or Stellite® 8 -12 micron, Sharpened carbide sawmill sawblade 10 - 18 microns