



President's Message

## Secrets of Success

**Tom C. Webb**

J & B Eastern Saw & Tool  
Easton, Maryland

Mr. Webb called about 4:30 one Friday afternoon to place an order. Everyone else was gone so I helped him. When I got through I asked him what he was doing working so late (7:30 Friday evening his time.) He replied that he was really busy and he had been in the shop two days.

He has an old Barcalounger he sleeps in from time to time. He takes a nap then gets up and goes back to work.

This story says a lot about what kind of person and what kind of a businessman he is. First, he is there when the customers need him. Second, he keeps his promises. Third, he works hard.

What it doesn't tell you is what a thoroughly nice person he is. The girls here just think he is wonderful. (I should probably mention that they have a pretty long list of people they think are wonderful. They are just like that. Of course, we are in an industry with a huge number of really nice people.)

We talk a lot about success through new technology, which Tom is using. A lot of companies try to get successful by treating people poorly and some look like they might be succeeding.

It is very nice to see some succeeding through hard work and treating people well.



# Carbide Processors, Inc.

Northwest Research Institute, Inc.

Newsletter September, 2008

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

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

## More Product Choices



### You now get more choices from us.

We do what Wal\*Mart, Costco, Cabela's or any successful retailer does. You tell us what you want and we get it for you. We also work very hard to find, test and develop new products. We keep our costs down to keep your prices down.

**Cheaper Carbide** – we have a new line of carbide in European ISO grades (which we translate into USA "C" grades.) They are excellent quality, probably better than what you are buying now, but they are standard grades so the prices are excellent. (Available in both Standard and Economy grades.)

**Saw Plate** – We offer saw plate from three manufacturers. Cliff Gordon sold for Vollmer then Cascade Southern and then California Saw and Knife. He knows a great deal about saw plate. If you want a really top quality saw plate we can probably save you money. If you want better performance we can give you that. If you want more choices or faster delivery we can do it.

### Deals – We Got Deals.

If we have to beat a price on carbide, saws, plate or silver solder just let us know. We are willing to try about anything. Maybe a lower price on saws if we can supply replacement carbide. Lower prices for quantity, of course.

**Let us know if you have an idea.**

## Cliff Gordon

New Employee



This is Cliff Gordon, who many of you know through Vollmer, Cascade Southern Saw Co and then through Cal Saw. Cliff is now working with us.

Cliff is technically an employee but he brings so much knowledge and experience that we are doing a lot more listening to his suggestions than telling him what to do.

Cliff came to me after he left Cal Saw and suggested we work together. It wasn't a direction I was planning on going but Cliff is such a good man I couldn't pass up the opportunity.

Phone 503-838-1688

Fax 503-838-1563

Cliff toll free in Oregon 800-707-5802

### Our Product Lines

Finished Saws - Standard & Custom

Saw Plate - Peerless Saw Co., Sonoma Saw Co., Western Saw co.

Carbide – Economy, standard & High Performance grades

Economy grades \_ NEW

Standard C Grades - NEW

Nail Cutting & Non-Ferrous metal

Super C – tough and Long lasting

Cermet 2 – 2 to 5 times carbide life

### Filter Systems

Coolant, Test instrments, Lab testing

Better Braze alloy

New & Used equipment & Parts - New

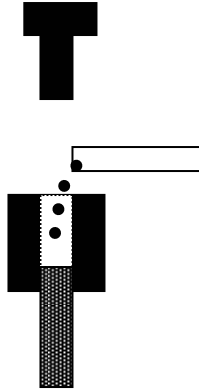
Fire suppression systems for grinders

## How Carbide is Pressed

Tungsten carbide shapes are made from a powder which is typically tungsten, carbon, cobalt and wax to bind it all together.

Carbide shapes are made three ways; pressing in a die, "whittling" a shape from a green piece of carbide or grinding a shape from a finished piece of carbide.

This is a carbide press. At top is a ram. The powder is poured into the press cavity (the die) then the ram comes down and compresses the powder. Once the powder is fully pressed the top ram withdraws. There is a second ram at the bottom of the cavity that comes up and pushes the part out of the cavity.



Below are two different dies (seen from the top) to press a diamond shape and a trapezoid respectively. Next to them is a saw tip seen from the side. Saw tips are pressed from the side. This means you can use one die to produce many different widths of the same shape.



The pressed parts are then presintered. In this step the wax is melted out. This leaves a piece of "green carbide" or "green state carbide". Since the wax has been melted out it is just powder pressed together. It is actually weaker than sidewalk chalk. It can be machined easily in this state although great care is required.

It is at this step that carbide parts get chipped edges. Some parts, such as saw tips, are made in large and very large batches. They are moved by conveyors and often poured into trays for final sintering. If this is not done carefully then one square edge impinging on another can cause chipped edges in the carbide parts. By contrast

you can use a .410 shotgun to fire fully sintered saw tips at a concrete block wall without damaging the saw tips.

The final step is sintering in which the carbon is forced into a relaxed tungsten matrix creating tungsten carbide grains and those grains are enveloped in a binder or matrix of cobalt of similar.

During the final sintering the parts shrink dramatically. Exactly how much shrinkage will occur is difficult to predict exactly. Parts are usually designed to be produced a bit oversize.

## Amazingly Simple Home Remedies"

From Mike West

1. Avoid cutting yourself when slicing vegetables by getting someone else to hold the vegetables while you chop.
2. Avoid arguments with the females about lifting the toilet seat by using the sink.
3. For high blood pressure sufferers ~ simply cut yourself and bleed for a few minutes, thus reducing the pressure on your veins. Remember to use a timer.
4. A mouse trap placed on top of your alarm clock will prevent you from rolling over and going back to sleep after you hit the snooze button.
5. If you have a bad cough, take a large dose of laxatives. Then you'll be afraid to cough.
6. You only need two tools in life - WD-40 and duct tape. If it doesn't move and should, use the WD-40. If it shouldn't move and does, use the duct tape.
7. If you can't fix it with a hammer, you've got an electrical problem.



## Taking a Simple Picture

All I wanted was one clear picture of our new, double bag, straight oil unit.

My first thought was a picture with a pretty girl in it. Here is Jackie who worked with the customer to develop a really great unit. It might have been a good idea but trying to hold a heavy unit straight and level while smiling was tougher than we thought.



Jackie has a beautiful smile. She looks pretty good while concentrating but it wasn't the picture I wanted.



I tried laying the unit on the floor and the dog came out to help. He is a lovely dog but it still wasn't the shot I wanted.

## Daily thought

Some people are like slinkies – not really good for anything .....but they bring a smile to your face when pushed down the stairs!





## Why Our Filters Work so Well and Last so Long

You need to filter to 10% of your tightest grinding dimension to get good grinds. If you are grinding to 0.001” then you need to filter out particles down to 0.0001” which is also 2.54 microns.

Since the standard seems to be about 0.0005” then filtering to 1 micron is about right.

Here is a chart showing the distribution of particles by size.

Size in Microns	Dirty Coolant
<1	0
1	140,317
2	14,382,515
3	15,364,737
4	19,644,411
5	13,751,087
6	9,120,620
7	1,894,282
8	631,427
9	420,952
10	280,634
11	0
12	140,317
13	70,159
14	70,159
15	140,317
16	70,159
17	65,774
18	85,506
19	26,309
20	
21	
totals	76,299,682

We use a laser counter. We can do this for you for \$199.

	Dirty	Filtered	Unused
pH	8.08	8.04	8.02
turbidity	45,000	15	7.02
conductivity	2,210	1,508	1,683

Coolant has many sizes of particles in it. If you filter for the smallest size then You rapidly plug up your filter. These are spheres and a 10 micron sphere is 100 times as large as a 1 micron sphere.

We can filter 1 micron particles with a 25 micron bag followed by a 10 micron bag. Here’s what happens.



Here we show a ping pong ball, a marble and some BB’s.

The ping pong balls are too big to fit through the holes. The marble would fall through the larger hole. The BB’s would definitely fall through which is why they are sitting on a piece of scotch tape.



First the filter traps the particles too big to fit though the holes. Here it is ping pong balls.



Then we trap smaller particles shown here by marbles.



Once the marbles have plugged up the holes in the ping pong balls we can trap BB’s.

## How our filters pull out oils

Tramp oils and used oil becomes thicker, stickier and agglutinates into larger particles. These larger particles get trapped in the filters as well.

## Double Bag Filter System for Oil



This is our double bag filter system for filtering straight oils used in grinding carbide.

We designed these systems for a company that is dominant in their section of the carbide tool industry. They were using a centrifuge to clean the oil but still had to change the oil every month. With over 100 machines this was a huge expense.

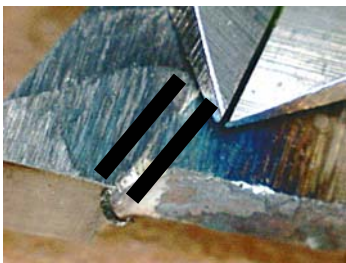
We retail these wall mounts at \$985 with quantity discounts. The company bought 102 of these units. They now get three months from their oil and are going for six months. These units paid for themselves in about 2 months.

## Tip Breakage from Braze Joints That Are Much Too Thin

The strongest joint, in terms of tensile strength, is about 0.0005". However steel grows about 2 ½ to 3 times as much as carbide during brazing. This puts a lot of stress on the carbide as it cools. A braze joint thickness of about 0.003" to 0.005" if what we recommend.

I took a good tip and ground it down so we could photograph the thickness of the braze layer. The calipers in the picture are set to 0.005" and the line of braze alloy should be somewhere around that size.

The line of braze alloy is between the thick black lines and looks to be maybe 0.0005" to 0.001" thick.

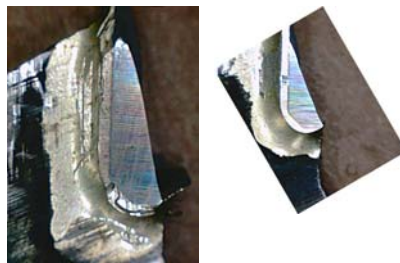


What happens with a braze joint that is much too thin (and it looks like Bag-24 alloy) is that the tips are stressed and break when impacted.

Two views of same tip – This was the first tip broken. Once this tip was broken it put more impact on the next one and the one after that.

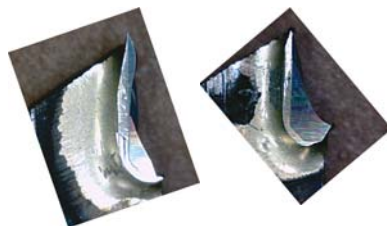


Heat stress is often recognized by a "J" shape or chair shape. Here it is a J shape. (Maybe a reverse J shape)



Broken tips look more like this. They pretty well have a straight line.

It looks like the amount of braze alloy used was about right. Plate cleanliness and temperature control were good. However a great deal of the braze alloy was pushed out of the joint. Below are pictures of braze joints on the failed saw.



The shoulders are very big as is the flow onto the steel.

In the picture below we see a different saw blade with entirely different braze joints.



Above you can see very good braze joints. There is some flow onto the steel and there are good fillets (or shoulders) of alloy behind the tips.

## Average silver depth

We recommend an average silver depth of 0.010".

You take the length and width of the back of the tip and multiply it by 0.010" to get the volume of silver braze alloy you need. For a WF7160 using 0.046" wire you need a piece 0.415" long. This gives you a starting point. Some like more and some like less. In any case this is about enough to give you a little flow onto the plate, good solid fillets and a nice thick layer between the steel and the carbide.

## Braze alloys

It looks like Bag-24 braze alloy which is 50% cad free. When Cadmium first became a huge issue we did tests with Weyerhaeuser, SystiMatic, and Cascade Southern. We found this alloy to be about 40% weaker than 50% with Cadmium (Bag-3). The best Cadmium free alloy is Bag-22 which is 49% silver with Manganese.

## Bad Carbide and grinding

This carbide is not strong enough for this application however I think a more accurate way to look at it is that this is good carbide used improperly. I think the same could be said for the grinding. If there are carbide problems or grinding problems they will show up once the brazing is adjusted.

## Adjusting the brazing

The brazing might be just a little bit cool. Whoever is doing may have developed the habit of underbrazing just a bit in order to protect the plate. Again this is a very fine distinction.

What is more important is that it looks like the tips are being pushed into the joint. The tips should sort of suck into the joint.

We have a brazing video on our web site at [www.carbideprocessors.com](http://www.carbideprocessors.com). It was made by Don Wallinger of West Coast Saws as well as Russell and Jesse Hartley in Alabama. It shows two very different techniques but both are very successful in that they have zero tip loss or tip breakage. If that's not handy we can send you a disc.



# Temper Blue Plate Vs. Temper Gold Plate Or “the homely girls are better dancers”

My Dad tried to raise my brother and me to be gentlemen. One of his rules was that we should be nice to all the girls whether they were pretty or not. At school and church dances he thought we ought to dance with homely girls as well as the pretty girls. Dad felt it was just the right thing to do. Then he would add that the homely girls tended to be better dancers and would be nicer to us than the pretty girls.

A similar situation exists with Saw Plate

Here is a letter from Steve Hartshorn of Peerless Saw Co.

“We have been trying to explain the advantages of using “Temper Blue Plate” for guided edger saws as much as we possibly can. It is the best possible quality to be made for a saw body in our opinion. We believe this so much that we try to get every customer to order temper blue plate when making a guided edger saw blade. However, there continue to be many customers who do not want to use this product strictly due to the appearance of the saw. The temper blue plate goes through an extra tempering cycle, done under pressure, for an 8 hour period. The result is a flatter, more stress free saw body. A secondary benefit is a resistance to rust, much more so than a standard surface ground body.

We have found that many customers prefer and continue to order temper gold plate from us and will not accept a temper blue plate. This is fine, as we will gladly do what our customers ask. This does not make it less “painful” for us to know as a vendor that our customers are paying for something where we believe there is no benefit.

Why not pay more for something that would actually improve the product?

There seem to be 2 opinions on the benefits of temper gold. Peerless’ opinion is that there is no benefit to the temper gold process. Tempering a saw body gold is done at a lower temperature than temper blue, the tempering cycle is about 42 minutes (8 hours for temper blue), and the tempering is not performed under pressure. All it does is turn the plate a beautiful, radiant gold color. From what I am told the gold color wears off after the blade has been run for a short time.

The opposing view on the temper gold benefit holds that even though the tempering cycle is short and at a lower temperature that some stresses are removed from the body.

Many sawmills order every guided edger saw body tempered blue and have for years. They seem to be the exception rather than the rule. The main reasons I hear that people do not want to use temper blue is because they do not care for the appearance, they think the plate has been burned up, or they may simply not want to pay the extra \$2.00 over a shiny ground saw body.

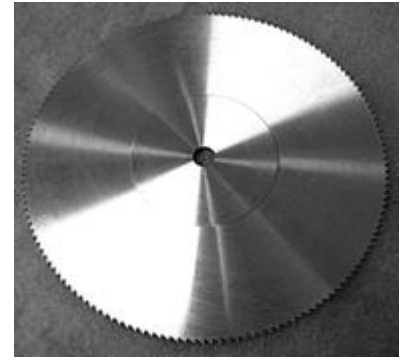
I’m telling you this for 2 reasons:

1. You are interested in selling saws and saw plates – the best possible product. My opinion is that you should know that “Temper Blue” spline saws are the best guided edger body we make.
2. You may wish to have some info for your next newsletter. Feel free to use any info from me/Peerless that you want.

We have a brief description of these tempering processes in our catalog, page 31.

Mr. Gordon is a very smart guy and I’m sure he knows a thing or two about temper blue and temper gold plate. I would certainly ask his opinion as well.

Have a fun & productive day,  
Steve



**The gold plate process leaves a pretty, shiny surface.**



**The Temper Blue Plate leaves a dark ring around the edge.**

I checked with Cliff Gordon and he agrees with Steve completely. This doesn’t mean that they are right 100% of the time. If gold plate works better for you we will be happy to sell it to you.



Just to make sure we were clear on the subject, Steve Hartshorn sent along this picture of Diane Lane. Steve wanted it made clear that Diane Lane was very pretty but not nearly as pretty as his wife.

# 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

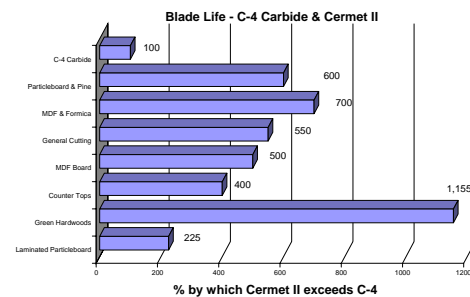


## Cermet II® 8 days instead of 5 in MDF

**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 Cermet 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.

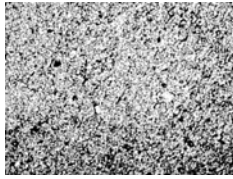
Nathan Hull, Grinderman  
Marvin Wood Products

## Purified Flux

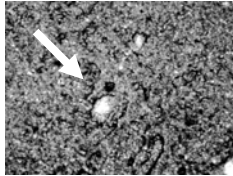
30% To 100% Better  
Braze Joints  
(50x magnification)



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>

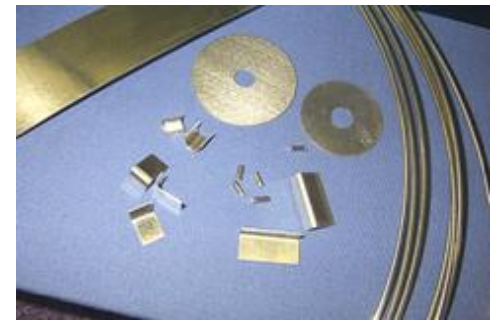
2. Carbide Saw Manual - Lowell freeborn  
<http://www.cafepress.com/freebornmanual.80464996>

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.



## The New Suit Joke

From Paul Duclos (who claims he got it from his pastor)

The story is from a friend of mine. .

After 22 years of dealing with my headaches, I have finally found some relief: I found a good competent doctor who said, "Brent, the good news is I can cure your headaches. The bad news is that it will require castration. You have a very rare condition, which causes your testicles to press on your spine and the pressure creates one hell of a headache. The only way to relieve the pressure is to remove the testicles."

I was shocked and depressed. I wondered if I had anything to live for. However, I had no choice but to go under the knife.

When I left the hospital, I was without a headache for the first time in twenty years, but I felt like I was missing an important part of myself. As I walked down the street, I realized that I felt like a different person. I could make a new beginning and live a new life.

I saw a men's clothing store and thought, "That's what I need... A New Suit." I entered the shop and told the salesman, "I'd like a new suit." The elderly tailor eyed me briefly and said, "Let's see... Size 56 regular." I laughed, "That's right, how did you know?" "Been in the business 60 years!" the tailor said. I tried on the suit, it fit perfectly.

As I admired myself in the mirror, the salesman asked, "How about a new shirt?" I thought for a moment and then said, "Sure." The salesman eyed me and said, "Let's see, 33 sleeves and 18-1/2 neck." I was surprised, "That's right, how did you know?" "Been in the business 60 years." I tried on the shirt, and it fit perfectly.

I walked comfortably around the shop, and the salesman asked, "How about some new underwear?" I thought for a moment and said, "Sure." The salesman said, "Let's see... Size 44." I laughed, "Ah ha! I got you, I've worn a size 40 since I was 30 years old."

The salesman shook his head, "You can't wear a size 40. A size 40 would press your testicles up against the base of your spine and give you one hell of a headache."

## Are you an Oregonian / Washingtonian?

From Dave Garrett  
Warm Springs Forest Products

The Pacific Northwest According To  
Jeff Foxworthy:

1. You know the state flower (Mildew).
2. You feel guilty throwing aluminum cans or paper in the trash
3. Use the statement "sun break" and know what it means.
4. You know more than 10 ways to order coffee.
5. You know more people who own boats than air conditioners.
6. You feel overdressed wearing a suit to a nice restaurant or to church.
7. You stand on a deserted corner in the rain waiting for the "WALK" Signal.
8. You consider that if it has no snow, or has not recently erupted, it's not a real mountain.
9. You can taste the difference between Starbucks, Seattle's Best, and Veneto's.
10. You know the difference between Chinook, Coho and Sockeye salmon.
11. You know how to pronounce Sequim, Puyallup, Haceta, Yaquina, Yachats, Issaquah, Oregon, Yakima and Willamette.
12. You consider swimming an indoor sport.
13. You can tell the difference between Japanese, Chinese and Thai food.
14. In winter, you go to work in the dark and come home in the dark, while only working eight-hour days.
15. You never go camping without waterproof matches and a poncho.
16. You are not fazed by "Today's forecast: showers followed by rain," and "Tomorrow's forecast: rain followed by showers."
17. You have no concept of humidity without precipitation.
18. You know that Boring is a town in Oregon and not just a state of Mind.
19. You can point to at least two volcanoes, even if you cannot see through the cloud cover.
20. You notice, "The mountain is out" when it is a pretty day and you Can actually see it.
21. You put on your shorts when the temperature gets above 50, but still wear your hiking boots and parka.
22. You switch to your sandals when it gets about 60, but keep the socks on.
23. You have actually used your mountain bike on a mountain.
24. You think people who use umbrellas are either wimps or tourists.
25. You buy new sunglasses every year, because you cannot find the old ones after such a long time.
26. You measure distance in hours.
27. You often switch from "heat" to "a/c" in the same day.
28. You design your kid's Halloween costume to fit under a raincoat.
29. You know all the important seasons: Almost Winter, winter, Still Raining (Spring), Road Construction (Summer), Deer & Elk season (Fall).
30. You understood these jokes and will probably forward them.

## How The Fight Started

(I lost my notes – I'm not sure who gets credit (or blame) for this one.)

I rear-ended a car this morning. So there we are alongside the road and slowly the driver gets out of the car ...and you know how you just-get-sooo-stressed and life-stuff seems to get funny?

Yeah, well, I could NOT believe it . . he was a DWARF!

He storms over to my car, looks up at me and says, 'I AM NOT HAPPY!'

So, I look down at him and simply say, 'Well, which one are you then?'

. . and that's when the fight started .



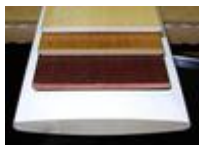
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