

April 2013



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It's about that time of the year again; some call it spring time, some call it the time when winter never ends, some call it hurry-up and get my car done before the snow flies. Whatever name you've chosen, it's pretty well guaranteed that you've gone out to your shop or garage recently and surveyed where you stand once the snow is gone and the salt is washed away. Whether you turned a wrench to keep plugging away or just lifted that cover to remind yourself what's been sitting I bet there's a thought that never crossed your mind: What would I do without it? What would that space set aside for your classic car(s) and tools and spare parts become if you weren't an automotive enthusiast? I had one of those thoughts over the winter. I think my garage would become a party room.

My "new" room would have a 6 person hot tub, a small bar setup complete with pizza oven, popcorn maker, fridge and ice maker, and microwave. There would be a ceiling mounted TV/movie projector which would be on a swivel so it could show on different screens depending on where you were in the room. Full surround audio system hooked up to some sort of jukebox system. There would be a nice assortment of video games along with a pool table and air hockey. The floor would be tile and short carpet and the walls would be decorated in pop culture items and posters. There would be a smoke blower, multi-colored disco ball, and laser machine. Before you finish deciding that I'm crazy, don't forget that I have 2 kids over the age of 10 and we don't live in Mayberry anymore.

So, what would your garage turn into?



March Meeting: Ravenworks

This month's meeting brought us to a first-rate and top notch machine shop and production facility. Ravenworks is a hidden gem in Maple Grove with a large facility dedicated to all aspects of engine machining. How dedicated you may ask? They have a 15,000 square foot facility that includes some of the best machining equipment available, highly knowledgeable employees, and a drive for only the best results in everything they do.

Probably the first thing you notice when walking into their shop is the cleanliness, especially with the amount of machinery and type of work they do. There are smaller toolboxes in the different machine areas to house the necessities and the machines are oriented with care to not waste space. You can't miss the machines themselves.



All of the engine-oriented units are Rottler brand, and none looked to be more than a couple years old. When your eyes adjust and you start to see the "trees through the forest", you notice that there's a lot more capability here than just boring a block or even porting a cylinder head. You will find an English wheel, lathe, serious drill press, and more of the

simpler metal working tools. There's a station for hand porting cylinder heads, a large blasting cabinet, smaller jigs and mounting plates at their respective stations, and a very long workbench



on one wall that held the nut and bolt bins, simple clean up supplies, and enough room to lay things out without taking up machining area space.

From square one, they can balance your crankshaft and rotating assembly. They can square up, deck, align bore, and cylinder bore your



Dimple porting available!

block. They have a separate machine for cylinder honing. They can check your cam for straightness and verify its specs (they find about 20% different from what the cam card actually says, by the way). Moving on to the cylinder heads, they have some really cool capabilities. Hand porting of the chamber



all the way up to having a CNC machine plot out each chamber and port with CAD display, and it doesn't stop there. They can

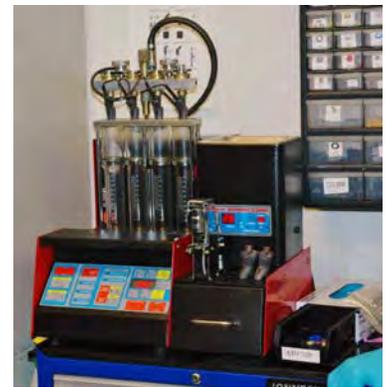


use that data collected to make corrections to the ports and chamber, then re-plot it out to see the differences.

If that's still not enough, they do have a SuperFlow flowbench which can actually measure, chart, and graph your results. I'm



sure this can be done with manifolds too. If you're an EFI guy, they also do fuel injector testing checking for leakdown, as well as both wide open and loaded to check the atomization. The injectors get an ultrasonic

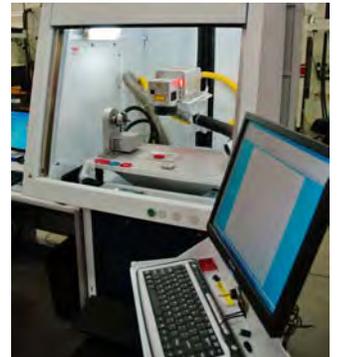


cleaning, the built-in filter gets cleaned, and new seals are installed all for \$22-\$25 each.



Now you're thinking: Well, they have all that machinery and check tolerances down to the thousandths, and with all the other precision work they do, are they able to see how well it all works together? Yup, they have a SuperFlow dyno cell and control room, and if that's not good enough they also have a matching chassis dyno for those times when you change things. Late model vehicles can benefit from their Diablosport systems and tuning services.

All of that capability in a shop is pretty cool, and you can bet that the guys who work there know their stuff. The cars that were on display in the shop shows their work off, and you can't help but look them over to see all the little things that set them apart. Look closely at the underside of the '49 Mercury and you'll see another aspect of Ravenworks that is growing: part manufacturing. They have an Okuma 5 axis milling machine that they are currently using to manufacture fuel line brackets, brake line clips, exhaust hangers and header flanges. That's pretty cool until



you see the laser engraver about 3 steps away. That Ravenworks logo you see on every part they manufacture? They did that about 20 feet from the block boring machine.



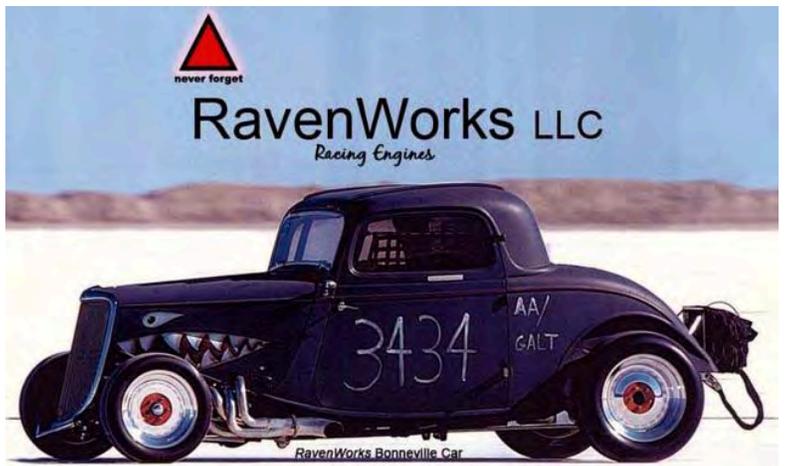
Next to the machining and manufacturing room, they have another area which houses their retail displays, shipping desk and materials storage. The most obvious thing you notice in the retail area is that there's another brand on display besides Ravenworks: Porter Mufflers. Once a very popular brand with a distinctive sound, Porter Mufflers had disappeared until just a few years ago. Now a sister company to Ravenworks, Porter Mufflers is back and being made right here in Minnesota. All the materials are cut and processed in-house and then assembled in Mound, MN. They are then brought back to the Ravenworks facility and packaged for resale or shipment.



By now, you're probably thinking how much cooler can a shop get? You might want to have a seat before you continue. Ravenworks owner Tom has a long history of racing which is the basis for all the machinery. The '34 Ford that sits in their shop boasts a special achievement. This car is driven by the Ravenworks staff out to Utah, gets a different set of wheels and tires, has the front lamps removed, and is raced on the Bonneville salt flats. It currently runs 190mph, has survived a spin out, and there is plans to make it achieve a place in the 200mph club. Pretty cool since it's a real driving car and not just a purpose built racer.



Lastly, what one thing does every awesome dream shop need? Its own lounge area. Through a door just off the main machining room is a completely



different world. This world is made from wood and glass and features a different kind of lubricating fluid: alcohol. This dude has a serious bar that's 12 stools long, has a couple more tables on the side, and is stocked with a bunch of name brand bottles. It is quite impressive in it's own right, and quite a good place to end a hard day of work.





The Right Stuff Busts Loose With Tubular Control Arms and Big Brakes! *By Chuck Hanson*

If you think that The Right Stuff Detailing (RTSD) is all about pre-bent lines and stock-style disc brake conversions, you better think again. A peek in their latest catalog or a quick visit to their website (<http://www.getdiscbrakes.com>) will reveal that they have broadened the scope of product offerings by a considerable measure.

We first learned of the latest offerings from Right Stuff at this year's Chevell-ibration. As we stopped by their display for a quick visit, we couldn't help but notice their new tubular control arms and

big brake kits. They are definitely a huge step in the right direction for anybody upgrading their existing OE brake systems, and a worthy consideration for anybody contemplating a Pro Touring buildup with their Chevelle.

One of our current projects is a Pro Touring '70-2 Malibu that will benefit from, among other things, a fuel-injected LS-engine and 4L60 trans, using the plethora of parts offered by Holley to mate the powertrain to the classic Chevelle chassis. And while we haven't found the right body to work on yet, we have procured a frame

to which we'll attach some really cool and effective handling hardware and brakes, and plan on doing so at a very affordable price. So, whaddya think? You in?

Well we are, and we started our project by ordering new upper and lower tubular front control arms, plus TRSD Signature Series front and rear disc brake kits. They arrived well-packaged, and all pretty with their powder-coated finishes. And the best part is they work as well as they look! We thought we'd give y'all a good peek at the components before we begin bolting everything up in our next issue. Check it out! **cw**



1. Each set of front control arms from TRSD features heavy-wall tubular construction to help shed a few pounds of unwanted weight from the front of your Chevelle, while providing additional structural rigidity. The ball joints are already installed in the precision pockets found on each arm.



2. Additionally, the control arms employ urethane bump stops on both uppers and lowers, and the sway bar link is adjustable with a spherical rod end at the control arm mount. Grade 8 hardware is used throughout.

Upcoming events:

April 20th: NCC Meeting at Craig's aka "Pushrod" in Shakopee

May 11th Anoka cruise opener

May 18th: NCC meeting at QA1

May 31-June 2nd: Pequot Lakes NCC cruise event

Hastings cruise opener June 1

North St Paul cruise opener June 7th

Back to the 50's June 21-23

Car Craft July 19-21



MEMBER PROFILE: BUNGY L-76

1-Name/spouse (since the spouses are also members) Steve Bungarden

2-What was the car you owned when the club started? 1964 Chevelle Malibu Convertible

3-Do you still have it now? Yes, I've owned it for 25 years.

4-Have you had any other cool cars since then? I also own a 32 Chevy 5W coupe, 53 Chevy Bel-Air, 80 Fairmont

Futura, 86 Thunderbird Turbocoupe

5-Have you held any positions within the club?

No, I've always worked at least two jobs and have never had the time.

6-What's your best memory of the club? Not sure I have a best one, many good memories, Karl's Bowtie Brunch, Car Craft, get togethers in general.

7-What have you gained from being a part of this club? Friendships have to be the biggest along with motivation to get back to working on my Chevelle.

8-What's your current ride specs? Future plans for it? Awards, features, etc?

Currently has a warmed over 283, 4spd M-20, 8.2 w/3.08 gears Plans call for a 409 cid "W" engine and a Strange S60 rearw/4.10 gears. It's originally white with blue interior and I'm keeping it that way. Originally started building this car for autocrossing and someday hope to get there.

9-Where are you from, what's your occupation? Originally from Wells, I moved to Mankato to go to school and been here ever since. I went to MSU for law enforcement and worked as a Mankato police officer for 15 years. I've been a delivery driver for Coca-Cola for the past 17 years.

10-Anything else you want to include? I've been a member of NCC since day one and made many great friends over the years. Also, a big thanks to everyone in the club for giving me the motivation to get working on my car again. College and work got it side tracked for many years but after being a member here, I've gotten back to it and it's now to the point of being drivable. Hopefully you'll see it on the road this year.

