

August 2015



The biggest car show of the summer for us Musclicar enthusiasts just happened, and for the first time in many years, Northstar Chevells had no real visible representation. That's a pretty strong opening line isn't it??? Yes, there were several members who brought their cars and parked on their own with friends, but there was no "Chevelle Row." I received more than a handful of texts and Facebook messages asking where Chevelle Row had moved to...?

I will readily admit that my car was absent. I know many others had good reasons too, and it was just a weird twist of fate that resulted in our empty space becoming a catch-all for stragglers, late-comers, and "friends of..." I did see several past and present members including Chris P who I went with, Dave and his red 70 (which used to be Rick P's), Mitch was outside the spectator gate when we arrived and we ran into him a couple more times later, Steve M who now has a tubbed white '66 Nova, and Justin with the cream colored '66 turbo car. He was camped out at the autocross track most of the weekend where he took home both 2nd in the Street Machine Challenge musclicar class autocross and 2nd in the dyno challenge. His wife Sheryl won fastest lady for the weekend in the same car (and beating a whole bunch of the field too). I saw Derek, Jenna and the kids, Jon and Bonnie, Terry, Bill L and John, and probably a few others I'm forgetting. Oddly enough, I also did not see MOPAR Alley. I think they must be in the same situation we are in, or maybe they all bought new Challengers? I saw at least a dozen of those lined up together on the south side of the fairgrounds.

As for the lack of club visibility, don't worry. We'll "get the band back together" next year. We'll have to get a head count, have a couple volunteers roping off, and have one or two early birds there to assure our space doesn't shrink. We'll get the tent and banners back up, everyone wearing their shirts and maybe fire up a grille too? We could do the "you've been spotted" card drop and photo shoot again too; I think it really helped reach out to other owners. Next year we'll be hard to miss.

Remember the big hubbub about everyone going to the Car Craft show in Wisconsin? Yawn. I have heard and read conflicting reports of the attendance numbers. St Paul did seem a little thinner, especially in the vendor area, but I liked it. I saw less junk, less trucks, and overall it felt like a very large neighborhood cruise. According to Car Craft, they saw attendance in the multiple thousands, but one vendor with multiple trucks said the show in WI was a waste of their time, guessing attendance was actually in the 600-800 range. Searching Car Craft's site, I couldn't find any of the typical wide angle pictures of participants down a street, over a field, or even a high up shot of a parking lot??? Hopefully it was due to the layout and not low attendance. I think they will be past the typical first year problems and should expect a big turnout. I do know that they had some really nice cars, some high end builders, and it was still one of the bigger shows for the area all year. Look for their coverage to come out in print over the next few months, unfortunately with fewer Twin Cities area cars now.

AUGUST MEETING/EVENT: Keep your eyes peeled on the member's section for the exact date and time of Derek's Chevelles and Shooting meeting/event in August. In the past, we have had a great turnout with many members bringing their families out for something a little different. If you're curious about firearms but nervous about the experience, this is a perfect time to get some exposure in a **controlled** environment with experienced people. In the past, virtually all sizes and styles are represented (no artillery please) and their owners are more than willing to share their knowledge with everyone. With a little arranging with members ahead of time and a quick trip for extra ammo, you could probably try out a weapon you have thought about buying or always wanted to try. There will be a short safety meeting before the range goes live, and anyone in or near the range area will need ear and eye protection.

With technology rapidly advancing and new automobiles becoming increasingly more complicated, someone decided to put together a chart explaining what all of those little lights on your dash mean. Not all of these apply to every vehicle. Enjoy.



You can make many comparisons between the kitchen and the garage. No seriously, you can! Both typically have large cabinet spaces to hold all of your tools, consumables, reference materials, and large flat workspaces. Your tool box drawer contents are the equivalent to the utensil drawers, and if you go a step further, you can compare things like putty knives and spatulas or meat tenderizer mallets and hammers. Ever notice how a Kitchen Aid stand mixer looks a lot like an old drill press? I have a toaster oven and fridge in my garage, and many people have parts washers (or even old dishwashers used as parts washers) in their shop.

We all know there's little you want to take from your garage and use in the kitchen, but you would be surprised at how many things can be taken from inside the house and used in the shop. Sure, there's the obvious things like paper towels, plastic baggies, etc, but here's some other things you may not have thought of.

Cola	Battery terminal cleaner, bottomless bottles used as funnels
Easy off Oven cleaner	Great degreaser and anodizing remover, can etch polished surfaces
Baby powder	Belt de-squeaker, air leak tracer on weather strips
SOS pads	Basically steel wool with soap, great for gunk removal
Aluminum foil	Use wadded up (with cola) to remove corrosion from chrome, mask odd shapes, emergency fuses
Comet cleaner	Very cheap polishing compound, works well as a light abrasive paste
Kitty litter	Besides floor dry, it can be used as an odor eater and desiccant inside a musty or stored car.
Banquet tin pan	Perfect size for benchtop parts cleaning, and simple drain pans
Toothpaste	Light polish good for headlamps, lenses, etc.
Ivory soap	A couple drops with water make it perfect for color sanding
Frito's chips	Crushed up, can be used as radiator stop leak, pepper can work too
Bar soap	Rub a bar on a crack in gas tank to stop a small leak in an emergency
Wet wipes	Work well for shop rags at the track or roadside repairs
Garbage bags	Great for masking off stuff or over engines on stands
Clothes detergent	Removing oil on concrete stains
Beer	Often used as a lubricant to help stuck friends out of a jam

Speaking of garages, have you checked out JohnD's 40Watt garage floor upgrade posting on our website's forum? He used a combination of RaceDeck and GarageDeck panels in various sizes and colors to get a pretty cool design. According to John, it goes pretty easy once you get your layout designed. Tiles cut easily with a jigsaw, though a sharp blade and a sharp bend will work too.



Between the workbench, cabinets, ceiling, and new floor, it must feel like a whole new garage in there. I'd (almost) hate to get it dirty.

Cool Tool: GearWrench tap and dies

GearWrench took its ratcheting wrench design and applied it to tap and die tools. This supports the existing ratcheting tool sets by allowing users to purchase taps and dies individually.

Patented adapters lock the cutting tool into the ratcheting handles for straight threads on every job. The five-degree swing arc ratchet with reversing lever eliminates hand-over-hand turning, while the patented twist lock guide system ensures material stays properly aligned. For applications that require increased access, end users can extend the length of the tap and die system by combining adapters and any standard 3/8" drive extension.



Ask Away with Jeff Smith: Micron Ratings and What They Mean for Your Oil Filter

I've been looking at aftermarket billet aluminum oil filters with a stainless mesh filter that you can disassemble, clean, and re-use. Are these any good? I don't mind taking a filter apart and cleaning it. I'm thinking it might reveal problems before they really get bad but I'm not sure I'm getting as good a filter. What's the story on these filters?

Micron	Inches
10	0.00039
25	0.00098
30	0.00118
40	0.00157

Jeff Smith: I've looked into the specs of a couple of these filters. As you mentioned, they use a stainless steel mesh that these companies rate in the neighborhood of 30 microns of filtering capacity. Let's start with what is a micron. In layman's terms, 1 micron is equal to one millionth of a meter or 0.00039-inch. To put this in perspective, a human hair measures between 40 and 80 microns.

According to Fram's Technical Training Manager Jay Buckley, dirt and foreign material measuring smaller than 10 microns will be small enough to be carried in suspension in the oil and will pass through even tight bearing clearances. Material larger than 20 microns is generally considered too large to pass through tight bearing clearances although with performance engines with main bearing clearances of 0.0030-inch, this is certainly possible. But generally speaking, foreign material in the range between 10 and 20 microns will potentially do the most engine damage over time. So a filter that can efficiently filter within this range would offer distinct advantages and certainly reduce engine wear.

There are several tests that some manufacturers perform to test the efficiency of a filter. The original test was a single pass efficiency (SPE) test where the oil passed through the filter once and the amount of dirt captured is rated relative to its efficiency measured. In this case, if the filter removed 9 out of 10 of the contaminants of a given size – 20 microns for example – then the filter would have an efficiency rating of 90 percent. While this test has validity, the more accurate test now generally used is the multi-pass efficiency test (MPE) where the oil passes through the filter more than once. This is regarded as a better measure because most passenger car engines do not filter 100 percent of the oil pumped into the filter. During cold start operation and during high rpm operation, some oil is routinely by-passed around the filter to minimize a serious pressure drop across the filter.

All quality oil filters use an internal by-pass valve. This bypass is designed to avoid a situation where the filter becomes clogged and cannot supply a sufficient volume of oil to the engine. Dirty oil is better than no oil at all. For a typical Fram filter, this valve opens when the pressure on the inlet side of the filter exceeds between 12 to 30 psi more than the outlet side of the filter.

According to Buckley, from a purely legal standpoint, if a filter traps one piece of 30 micron debris, the manufacturer can state it has the capacity to filter at the 30 micron level. Buckley says, "The only way a micron rating means anything is to use the filter efficiency numbers published by the manufacturer." This filter efficiency rating is listed as a percentage. "For the Fram Ultra Guard filter, it is 99 percent efficient at 20 microns. At 10 microns it's 94 percent efficient."

Buckley also made a good point that unless you use brand new solvent to clean a reusable filter, it's possible you may not be really cleaning the filter as much as you might hope. Remember, a 30 micron piece of dirt is only slightly larger than 0.001-inch.



Fram's racing filters are designed to increase oil flow through the filter but this comes at the cost of reduced efficiency in terms of dirt below 30 microns. This assumes that the oil will be changed much more often on a race style engine. For this reason, race filters are not recommended for daily street use.

One reason the Fram Ultra Guard is so efficient is that it uses a higher quality filtering media. A standard Fram Extra Guard, and many other standard oil filters, use a cellulose/synthetic blend filter media. Each company's design of this media is proprietary. Upgrading to the Ultra Guard filter, this uses a dual layer synthetic glass filter material that is more efficient at capturing debris between the 10 and 20 micron size.

Basically, filters trade efficiency for flow rates. A perfect filter would eliminate all debris with no reduction in oil flow rate, but this – as yet – is not possible. In order for a filter to really clean the oil, it will present some restriction to flow. This means that at any one time, a certain amount of oil is by-passed around the filter. This happens with any filter, regardless of design. If an increased oil flow rate is necessary – as with an oil filter intended for race engines, this will use a material that will allow more oil flow – which generally means it will not filter quite as efficiently as a production car filter. Fram, for example, also makes racing filters that feature a thicker-wall container and a different filter material that allows a higher flow rate. These filters are generally not as efficient in cleaning in the 10 to 20 micron range because the understanding is that a race engine will change the oil and filter far more often than a street-driven engine.

As long as we are on the subject of keeping the engine oil clean, it's important to mention that the very first line of defense for clean engine oil is to start with highly efficient air filter. A high-quality air filter goes a long way toward keeping the inside of the engine clean along with a functioning positive crankcase ventilation (PCV) valve that will pull oil vapors out of the engine.

To wrap this up, Buckley offered this quote from GM engineer David Staley taken from a 1988 SAE paper on oil filter efficiency. "Compared to a 40 micron filter, engine wear was reduced by 50 percent with 30 micron filtration. Likewise, wear was reduced by 70 percent with 15 micron filtration."

Author: Jeff Smith

Jeff Smith, a 35-year veteran of automotive journalism, has had a passion for cars since he began working at his grandfather's gas station at the age 10. An Iowa native, graduating from Iowa State University with a journalism degree in 1978, he combined his two passions: cars and writing. Smith began writing for Car Craft magazine in 1979 and became editor in 1984. In 1987, he assumed the role of editor for Hot Rod magazine before returning to his first love of writing technical stories. Since 2003, Jeff has held various positions at Car Craft (including editor), before moving to the senior editor role at Hot Rod and Chevy High Performance, and ultimately returning to Car Craft. He has written books on small block Chevy performance, and even cultivated an impressive collection of 1965 and 1966 Chevilles. An accomplished engine builder and technical expert, his newest position as Senior Technical Editor with Xceleration Media will focus on the tech-heavy content that is the foundation of Power & Performance News. He also serves as a regular contributor to OnAllCylinders.



Patriotic Chevilles

