July 2015

NORTHSTAR CHEVELLE CLUB

MINNESOTA'S '64 - '87 CHEVELLE and EL CAMINO CLUB

Holy cow, its July already. No doubt everyone has been to at least one car show or cruise by now, even without a car. If you've been following OscarZ's progress online, you'll be happy to know he actually made it out to "Dan's 4th annual Car-B-Q" last Saturday at Lares Corporation in Cambridge. The proof is in the reflection on 67SS's Camaro.

Since we're on the subject, don't forget that the next meeting is 2pm, July 25th at the Peppermint Twist Drive-In in Delano. At 4pm, we will cruise to the downtown Anoka Show. It's a great cruise when the weather is clear, typically several hundred cars. There's parking in a large lot to the north, plus along several streets in the blocked off area. Hope to see everyone there!

Cool tool: Dry Ice Blaster Machines

By Bobby Kimbrough

Before you ask, yes, dry ice blasting machines can cost a pretty penny. The good news is dry ice blasting machines can be rented at many equipment rental facilities. If there has ever been a product that would make an engine builder want to "go green," this one is it. Dry ice blasters clean tough-to-remove contaminates, paint, grease and baked on grime without leaving a residue on the parts or a hazardous waste stream left behind.

In a nutshell, dry-ice blasting is similar to abrasive blasting except frozen carbon dioxide (dry ice) is substituted as the blasting medium. The dry ice is accelerated in a pressurized air stream at the surface to be cleaned. Unlike other medium that uses force as the sole means of cleaning crude off of the surface, dry ice blasters use the kinetic energy along with thermal shock to remove contamination. Once the dry ice hits the target surface, the rapid change in state from solid to gas also causes microscopic shock waves, which also assists in removing the contaminant.

The machines come in two types of delivery systems, single-hose or two-hose dry ice blasting. Most industries that have tried the dry ice blasting have identified the single-hose type as having a greater delivery rate of the dry ice pellets. Developed by Cold Jet, LLC [2] in 1986, the single-hose dry ice blasters are generally used when the surface to be cleaned has a heavier build-up of contaminates.

Benefits of Cold Jet dry ice blasting:

It is a non-abrasive, nonflammable and nonconductive cleaning method
Is environmentally-friendly and contains no secondary contaminants such as solvents or grit media
Allows most items to be cleaned in place without time-consuming disassembly
Can be used without damaging active electrical or mechanical parts or creating fire hazards
Can be used to remove production residues, release agents, contaminants, paints, oils and biofilms
Carbon dioxide is a non-poisonous, liquefied gas, which is both inexpensive and easily stored at work sites.

Reduced cleaning time, without abrasives or leaving behind a hazardous waste stream, and no chemical residue left on the components sounds almost too good to be true. In fact, it sounds perfect for cleaning engines!

How cool is this???

I bet there are only a handful of members who have ever heard of an SLC. Fewer yet have ever seen one. Coming soon to a track and the occasional show/cruise near you: StormTrooper… uh, I mean ***The Grifter***. Built by certified car guy Eric McClellan, this is not your everyday car. SLC stands for Superlite Cars. In essence, you buy a frame and body shell, and determine which wheel and tire combination it is shipped to you with. You get a blank dash panel, pedal set and reservoirs, E-brake lever, shifter, steering rack/column/wheel, simple seats, and a roll bar. After that, you're on your own. Of course, you can buy it in varying stages of completeness (for additional money), but for the do-it-yourselfer, every detail is now up to you to plan, purchase, and install. It's the jigsaw puzzle from hell where you buy all your pieces separately, will most likely have to customize each one, and then make them fit in the confined space of a 2000 pound bullet.

What's the cost? We'll get to that later. How much work is it? The answer begins with "If you have to ask…." Starting with a bare shell that still needs hinges put on the doors (he chose butterfly style) and the need to cut openings for tail lamps (he chose Dodge Dakota I believe); you create your own car. System by system, piece by piece. Don't forget: you WILL be cutting out the windshield and rear window openings too. With the vast options out there, it really takes some serious coordination to get parts that work well together, and then remember that you may need to service them at some point later, so you mount them smartly.

With a more than passing interest in Autocross racing, and having built the 1968 Camaro named Blue Hour several years back, Eric actually had a pretty good idea of what he wanted. He based all his decisions on his goal of making a streetable, no frills car that would perform competitively on the road course tracks. So no frills, in fact, that the base white gel coat body will not be getting any paint in the foreseeable future. He claims the surface will polish up decently, and may help keep costs low in case of off-course excursions while at the track. When I first saw the white body with blacked out details, I named it StormTrooper, though Eric had already christened it Grifter which comes from it not fitting into any class and being a "cheater car".

Introduce the long list of parts: LS376/525hp, Porsche G50-01 manual transmission, Forgeline wheels, Billet control arms, QA1 coilovers, 4 piston brakes front and back, a Stack dash/controller, and a host of other goodies. Figure the cost of all those things, their supporting cast of hardware, wiring, sensors, etc and then add that all up. Eric estimated that he's into it for the cost of a new Corvette, give or take. If you think about it, a purpose-built musclecar in show condition is pretty comparably priced.

What's the top speed? Straight from Eric: "*We don't really care what the top speed is, we care about how fast we can take a 90 degree corner outside the front of our house and terrorize the neighbors. That's the point.*" Hard to argue.

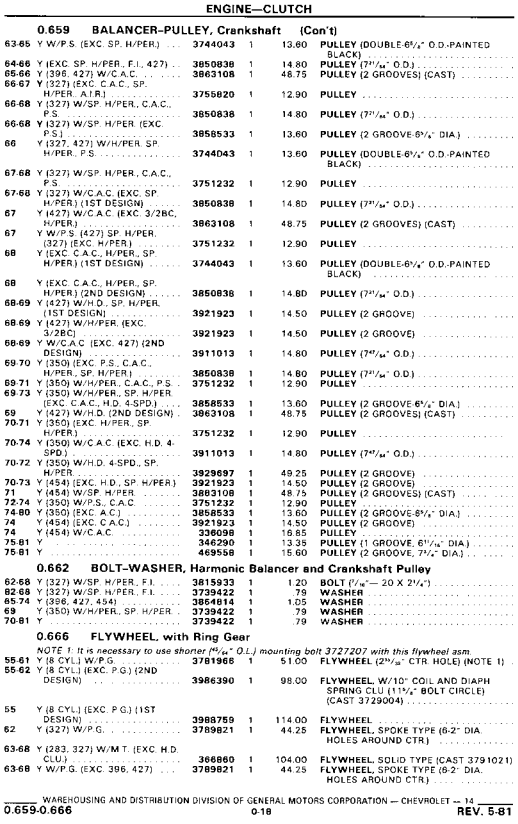
For details of the build check it out: **GearheadDaily.com**. That's where I got the pictures from too. Eric is one of the Editors there, and has a bunch of videos and articles showing progress. The site is very "normal guy" oriented, and touches on a lot of different aspects of car guy life and humor. He also just posted some videos of it running and now even some autocross track time.

No way could I put enough pictures on here to show the car's build, go to the site to check it out!!!

You can also follow his build online at:
http://www.pro-touring.com/threads/109688-Eric-s-Project-quot-Grifter-quot

Have you ever wondered how GM parts are numbered? As a partsman, there's times I STILL wonder what their rationale is. Every part coming from any auto manufacturer will have a part number. It's how they keep inventory and its how everything is accounted for. Going one step further, GM actually has a way to sort their parts before assigning numbers.

As a kid, we all learned about the Dewey Decimal System the libraries use. GM has a similar setup and they call it the group (or class) numbering system. It begins with whole numbers 1-15 for cars, and 1-9, 16, 17 for trucks. They also have GM Accessories in group 21. Within each group there are subgroups like 1.836 (oil filters), 4.003 (transmission assemblies), 10.777 (passenger car window switches), 16.068 (truck mirrors), etc. There are literally hundreds of sub groups and it takes a long time to get accustomed to how they are laid out.



ENGINE—CLUTCH

0.659 BALANCER–PULLEY, Crankshaft (Con't)

63-65	Y W/P.S. (EXC. SP. H/PER.)	3744043	1	13.60	PULLEY (DOUBLE-6¼" O.D.-PAINTED BLACK)
64-66	Y (EXC. SP. H/PER., F.I., 427)	3850838	1	14.80	PULLEY (7¹⁵/₁₆" O.D.)
65-66	Y (396, 427) W/C.A.C.	3863108	1	48.75	PULLEY (2 GROOVES) (CAST)
66-67	Y (327) (EXC. C.A.C., SP. H/PER., A.I.R.)	3756820	1	12.90	PULLEY
66-68	Y (327) W/SP. H/PER., C.A.C., P.S.	3850838	1	14.80	PULLEY (7¹⁵/₁₆" O.D.)
66-68	Y (327) W/SP. H/PER. (EXC. P.S.)	3858533	1	13.60	PULLEY (2 GROOVE-6¼" DIA.)
66	Y (327, 427) W/H/PER. SP. H/PER., P.S.	3744043	1	13.60	PULLEY (DOUBLE-6¼" O.D.-PAINTED BLACK)
67-68	Y (327) W/SP. H/PER., C.A.C., P.S.	3751232	1	12.90	PULLEY
67-68	Y (327) W/C.A.C. (EXC. SP. H/PER.) (1ST DESIGN)	3850838	1	14.80	PULLEY (7¹⁵/₁₆" O.D.)
67	Y (427) W/C.A.C. (EXC. 3/2BC, H/PER.)	3863108	1	48.75	PULLEY (2 GROOVES) (CAST)
67	Y W/P.S. (427) SP. H/PER. (327) (EXC. H/PER.)	3751232	1	12.90	PULLEY
68	Y (EXC. C.A.C., H/PER., SP. H/PER.) (1ST DESIGN)	3744043	1	13.60	PULLEY (DOUBLE-6¼" O.D.-PAINTED BLACK)
68	Y (EXC. C.A.C., H/PER., SP. H/PER.) (2ND DESIGN)	3850838	1	14.80	PULLEY (7¹⁵/₁₆" O.D.)
68-69	Y (427) W/H.D., SP. H/PER. (1ST DESIGN)	3921923	1	14.50	PULLEY (2 GROOVE)
68-69	Y (427) W/H/PER. (EXC. 3/2BC)	3921923	1	14.50	PULLEY (2 GROOVE)
68-69	Y W/C.A.C. (EXC. 427) (2ND DESIGN)	3911013	1	14.80	PULLEY (7¹⁵/₁₆" O.D.)
69-70	Y (350) (EXC. P.S., C.A.C., H/PER., SP. H/PER.)	3850838	1	14.80	PULLEY (7¹⁵/₁₆" O.D.)
69-71	Y (350) W/H/PER., C.A.C., P.S.	3751232	1	12.90	PULLEY
69-73	Y (350) W/H/PER., SP. H/PER. (EXC. C.A.C., H.D. 4-SPD.)	3858533	1	13.60	PULLEY (2 GROOVE-6¼" DIA.)
69	Y (427) W/H.D. (2ND DESIGN)	3863108	1	48.75	PULLEY (2 GROOVES) (CAST)
70-71	Y (350) (EXC. H/PER., SP. H/PER.)	3751232	1	12.90	PULLEY
70-74	Y (350) W/C.A.C. (EXC. H.D. 4-SPD.)	3911013	1	14.80	PULLEY (7¹⁵/₁₆" O.D.)
70-72	Y (350) W/H.D. 4-SPD., SP. H/PER.	3929697	1	49.25	PULLEY (2 GROOVE)
70-73	Y (454) (EXC. H.D., SP. H/PER.)	3921923	1	14.50	PULLEY (2 GROOVE)
71	Y (454) W/SP. H/PER.	3863108	1	48.75	PULLEY (2 GROOVES) (CAST)
72-74	Y (350) W/P.S., C.A.C.	3751232	1	12.90	PULLEY
74-80	Y (350) (EXC. A.C.)	3858533	1	13.60	PULLEY (2 GROOVE-6¼" DIA.)
74	Y (454) (EXC. C.A.C.)	3921923	1	14.50	PULLEY (2 GROOVE)
74	Y (454) W/C.A.C.	336098	1	16.85	PULLEY
75-81	Y	346290	1	13.35	PULLEY (1 GROOVE, 6¹¹/₁₆" DIA.)
75-81	Y	469558	1	15.60	PULLEY (2 GROOVE, 7¹¹/₁₆" DIA.)

0.662 BOLT–WASHER, Harmonic Balancer and Crankshaft Pulley

62-68	Y (327) W/SP. H/PER., F.I.	3815933	1	1.20	BOLT (⅞"—20 X 2¼")
62-68	Y (327) W/SP. H/PER., F.I.	3739422	1	.79	WASHER
65-74	Y (396, 427, 454)	3854814	1	1.05	WASHER
69	Y (350) W/H/PER., SP. H/PER.	3739422	1	.79	WASHER
70-81	Y	3739422	1	.79	WASHER

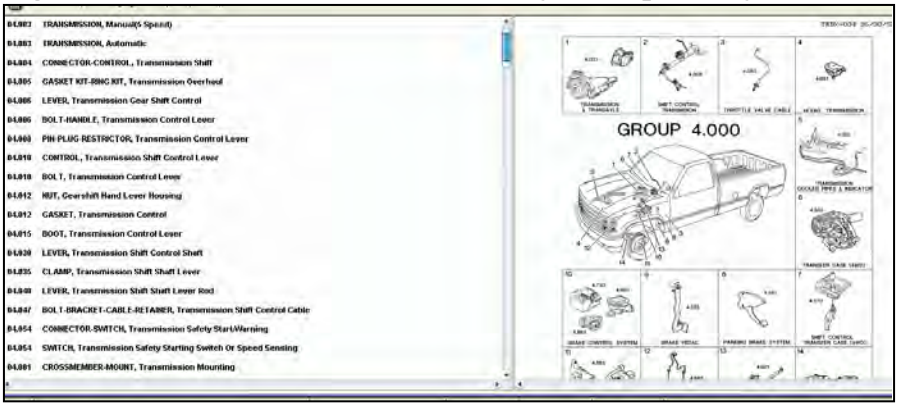
0.666 FLYWHEEL, with Ring Gear

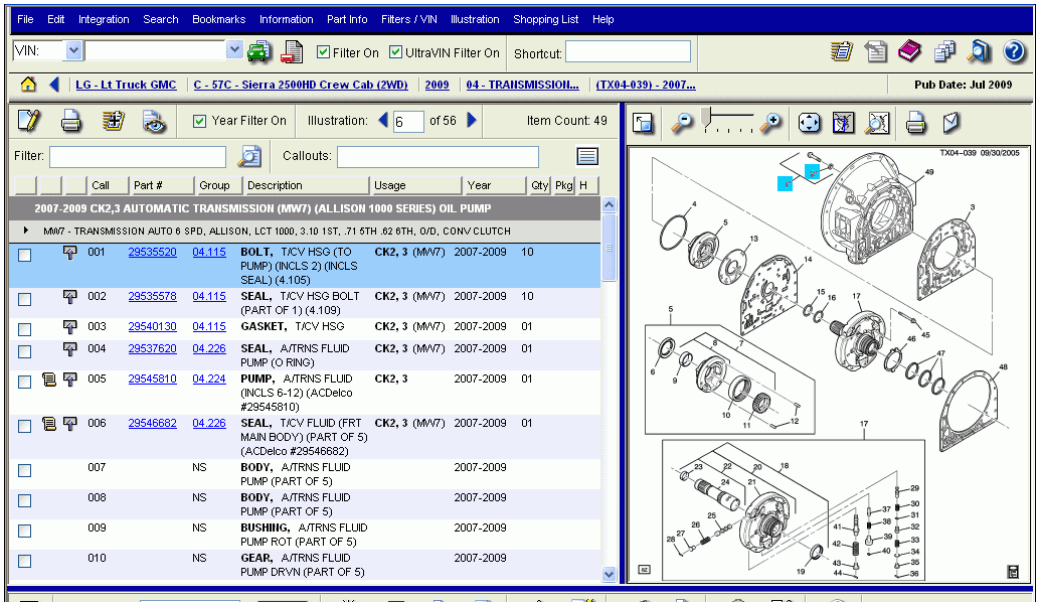
NOTE 1: It is necessary to use shorter (¹⁵/₁₆" O.L.) mounting bolt 3727207 with this flywheel asm.

55-61	Y (8 CYL.) W/P.G.	3781968	1	51.00	FLYWHEEL (2¹⁵/₁₆" CTR. HOLE) (NOTE 1)
55-62	Y (8 CYL.) (EXC. P.G.) (2ND DESIGN)	3986390	1	98.00	FLYWHEEL W/10" COIL AND DIAPH SPRING CLU (11¹⁵/₁₆" BOLT CIRCLE) (CAST 3729004)
55	Y (8 CYL.) (EXC. P.G.) (1ST DESIGN)	3988759	1	114.00	FLYWHEEL
62	Y (327) W/P.G.	3789821	1	44.25	FLYWHEEL, SPOKE TYPE (6-2" DIA. HOLES AROUND CTR.)
63-68	Y (283, 327) W/M.T. (EXC. H.D. CLU.)	366860	1	104.00	FLYWHEEL, SOLID TYPE (CAST 3791021)
63-68	Y W/P.G. (EXC. 396, 427)	3789821	1	44.25	FLYWHEEL, SPOKE TYPE (6-2" DIA. HOLES AROUND CTR.)

In the "olden days", which would be before about 1990, a partsman would have to look every part up in the paper parts catalogs. You got very good at knowing all the popular group numbers since it meant a lot of page flipping. Before the early 1980's, all the car parts (except Corvette and Corvair) would be in one catalog for each division of GM (Buick, Olds, Chev, etc), and truck parts would be in another. Then each model got their own catalog because of the increase in options available and number of models. The '90s brought about computerized parts catalogs which helped, but it really took until about 2000 for a "smart" catalog to come about. To the right is a 1955-1981 Corvette only paper parts catalog page. You can see how many listings there are for something as simple as a crankshaft pulley. Remember this next time you hear someone say "They're all the same". There's small vs. big block, with or without C.A.C., different diameters, a couple had carb or tranny notes, and the ever favorite h/per or sp.h/per ones which would most likely be deep groove. I count 12 unique numbers. This is actually a continuation and the pre-1963 listings were on the page previous. You can see the crank bolt is listed next, along with washers, and then another new group for flywheels.

The latest parts computer catalogs are VIN based, and will identify the options your car or truck has and weed out the ones that don't apply to help speed up the parts searching process. It unfortunately doesn't translate from mechanic-speak or the "street name" into GM's official part term. It is searchable, but sometimes there is actually TOO MUCH information to sort through and it slows you down.





This is what the modern parts catalogs look like now. You can see the picture is for a 2009 ¾ ton HD with an Allison transmission, and a portion of the parts list associated to it. Each callout has a parts line, though not every part is serviceable as indicated by the NS (non-serviceable) note. You can see the group numbers, which are hyperlinked as well as the assigned part numbers and several other abbreviations most people will never need to know.

I typically search using the illustration pages, and then drill down into the pieces shown on that page. The main reason is that in my position I either have: A): someone who doesn't know exactly what the part they need is called or I want them to confirm it by sight, or B): It's a collision job and there will be a bunch of parts all grouped together on the same page which makes it faster. The latest versions also will let you hover over the number on the picture and it will have a part number bubble pop up.

So, that's all great, but HOW are they numbered??? GM uses only numbers and aside from a driver side/passenger side situation, the part numbers are pretty random. Numbers embossed on a metal part like a manifold are called casting numbers. Those numbers are for the raw piece, and that part may have several different ways it can be finished. Each finished version will be assigned its own unique number. Plastic parts are done the same way, with each color being a new number. Any time GM makes a modification from the original part design, it is assigned a new number so that it is traceable down the road if there is a problem to be found. Currently, GM has a maximum of 99,999,999 part numbers available to use. More than 95 percent of the part numbers with only 7 digits are already discontinued. Currently, GM does not use any domestic service repair parts with 8 digit part numbers starting in 3,4,6, or 7, for example **3**2154789 or **7**5421598.

Part numbers themselves are assigned in blocks to various development departments. For quite a while in the mid-late 90's, all recall parts started with the number 888xxxxx, or 8898xxxx. Until GM's "re-organization", all GM performance Parts chrome and dress up part numbers typically started with 1234 or 1236. Now, there's less identifiable reasoning to how things are numbered. Essentially, some engineer decides he needs to justify his job and redesigns a cup holder or something. When he's done, the new design is given the next number on the list for his division. Done. Simple, boring even. Gone are the days of part numbers with special meaning. The last one like that I remember was GM's ZZ430 crate engine that was numbered 12496**430**.

Hopefully, that sheds some light on the mysterious world of GM parts. Unfortunately, the GM parts catalog isn't readily accessible to the public, but with as complicated as it can be, that just might not be a bad thing.