DAKOTA CRUISERS

PRESIDENTS MESSAGE

January 2018

"SHIFT'N GEARS FOR OVER 20 YEARS"

Happy New Year!!! It is going to be New and it is going to be HAPPY! First order of something to do will be the NDSRA Annual Meeting and Christmas Party at the Sleep Inn in Minot on the 13th of January. Board meeting at 10:30 and general meeting at 1 PM. Then after that meeting, we have chartered busses for a garage tour like none other! During the whole event, there will be a swap meet. Tables will be provided and you can bring and sell your items at no charge. Then after that the evening banquet and Chinese auction will take place. All under one roof. $25.00 per person if you will be attending the banquet. Please contact The North Central Director, Dave Alberts with any questions or if you want to help out. mde@srt.com is his e-mail. We've waited 8 years to host this event.

January 20th, we have reserved the Summerset Court movie theatre for the movie GREASE. 1:30 show up for seating and the movie will start at 2:00. Come and bring a friend!!

Then on the 9th of Feb (move in) we will be enjoying the Wild About Wheels car show in Minot at the ND State Fair Center. We've been asked to furnish (I guess that's the correct word!) between 20 and 40 cars for the show. Detrick and I will be in charge of the event. We will be taking cars and vehicles that were not shown last year. We will be also starting a list for planning purposes. If you would like to have your vehicle considered for the show, please contact me at 240-6771. This show is open to anybody, not just Dakota Cruiser members.

Speaking of Detrick, let me welcome Detrick Thomas to the team of the Cruisers as the newly elected Vice President. Detrick hales from Texas originally but now claims Minot His home. He is stationed at Minot AFB and currently has about 22 years on active duty. Recent promotion selection to the highest enlisted rank of Chief Master Sergeant deserves Great recognition and as the VP of the club he is dedicated to the cause of our club. I hope he brings more youth and enthusiasm! Welcome Detrick! Also let me welcome Brian Olson to the team on the Board. Brian was in charge of the clothing sales for the club and did a fantastic job introducing a zippered sweat shirt and other new items for sale at club meetings and activities. Welcome Brian! Some other changes are that: Wayne Schumier will be handling the raffle tickets. Joe Uhrmacher will be handling clothing sales. And Bill Klimpel is setting up all of the "social activities", such as the Friday Lunch schedule and the "4TH WEDNESDAY OF THE MONTH EVENING DINNERS". Thanks to all in advance!!

Well, remember to update internet member profiles and check out the internet for updates and a schedule and of course, this newsletter---IN COLOR!

Happy New Year,

George

SUPPORTERS OF DAKOTA CRUISERS

C & R Radiator-Brian 701.223.0585
Dad's Garage-Lonn Satron 701.420.2003
Fastenal-Craig Lundgren 701.839.7566
KR Auto Body Repair-Kurtis Reid 701.339.3447
Jerry's Alignment & Repair-Jerry & Alison Frye 701.852.0332
Master Restoration-George Masters 701.240.6771
Niess Impressions 837.2767
Premier Physical Therapy-Blerim Dibra 701.837.8441
Sebo Motorsports-Ryan Sebo 701.837.9967
State Farm-Kellie Thorman 701.839.4999
Tuff Enuff Inc. 701.837.8833

Please pay patronage to our supporters.

The last Wednesday of each month, at 6:30 pm, the club has chosen to dine out. To ensure the restaurant will be ready for us, we need to get a head count to Bill if you will be joining. Please call 701.240.5803 with the number in your party the day before. January 24th will be at Olive Garden. Fridays noon luncheon for the month of January:

Paradiso, Starving Rooster, Badlands, and Grizzly's.

Please remember to call the hotline prior in case of changes.

Eddie was driving down the road and met a car coming the other way.

Although there was room to pass easily, Eddie forced the oncoming car to slow down and wound down his window and shouted 'Pig'.

Astonished, the other driver looked in his rear-view mirror and swore at Eddie.

Then his car hit the pig.

Well, there you go. Not everybody has your worst interests at heart! And sometimes when you help people your help is what gets them into trouble. Ah, the irony of life.

Solid Vs. Hydraulic Camshaft Shootout

http://www.hotrod.com/articles/mopp-0312-solid-vs-hydraulic-lifters/

Without a doubt, solid cams carry a certain mystique. In the muscle car days, solids were factory-fitted in some of the hottest iron out of Motown, including the early street Hemi. There was a little extra status when laying out the engine specs and telling the boys," . . . it's got a solid cam." Actually, all cams are solid. The real difference is in the lifters, with a corresponding change in cam-lobe profile to accommodate the requirements of the lifter. Solid cams have a reputation for higher rpm power, and for some, the image of a race-only piece. Solids require periodic adjustment, make noise, and are just a little different from what the average guy is running. For some, that's reason enough to want to run one.

We, however, were more interested in seeing what differences could really be found in power output. First, we offer a rundown of the differences between solid and hydraulic lifters, and why there may be power to be gleaned.

Hydraulics

Since the '50s, with a few notable exceptions, hydraulic lifters have been a Detroit norm. Hydraulic lifters self-compensate for valvetrain clearances, giving the consumer years of maintenance-free service. While hydraulic lifters themselves are much more complex than standard solid tappets, the accompanying valvetrain could be built much more simply and at a lesser cost, doing away with the provisions for valvetrain adjustment. Simple dirt-cheap, one-piece, stamped-steel rockers were the inevitable result. Best of all, the travel in the hydraulic mechanism soaked up variations in production tolerances with ease, undoubtedly streamlining the production process, eliminating the need to set valve lash at the engine plant and down the road in service. Hydraulics self-adjust to zero lash. They provide unrivaled quietness, a primary goal in OE engine design.

Hydraulics Or Solids For Performance?

All-out racing performance was never on the agenda when hydraulic lifters were conceived. However, the vast majority of performance cams sold are unquestionably hydraulic grinds. Some of the same attributes that made them a favorite with Detroit hold favor with many enthusiasts. Since most engines were initially set up with hydraulic cams, hydraulic performance cams are usually the most cost-effective replacement choice. Making a switch to a solid grind can come with quickly escalating costs, most often requiring the upgrade to adjustable rockers and compatible pushrods. Along with the cost, quieter operation and never having to adjust the valves make the hydraulic a tempting choice for dual-purpose applications.

Hydraulics work extremely well in moderate rpm applications-the range of most mildly modified street engines. Move up the performance, though, and the very hydraulic mechanism that makes them oh-so-sweet in a milder application can create problems. Why? Under the stresses of high rpm, the hydraulic piston, which serves to zero-out the clearances in normal operation, can either pump up or bleed down. These are two very different phenomena, both of which can hinder hydraulic-lifter performance.

All hydraulic lifters can absorb a small portion of the cam's lift profile in running, through fluid bleeding past the lifter's plunger piston during the lift cycle. In stock or mild street applications, absorption is likely negligible. Highly aggressive cam profiles and spring loads in a radical street or racing application can strain the hydraulic lifter's mechanism to the point where some performance potential is lost through absorption. Lifters with tight internal clearances and valving most accurately follow the cam's profile, and are termed stiff.

The second form of false motion is the better-known problem of lifter "pump-up." The hydraulic lifter's plunger is continually under hydraulic pressure from the engine's oiling system. Under demanding circumstances such as high rpm, the valvetrain can partially unload. This unloading can occur during the onset of valve float, during spring surge, or with valve bounce on closing. Unloading can All hydraulic lifters can absorb a small portion of the cam's lift profile in running, through fluid bleeding past the lifter's plunger piston during the lift cycle. In stock or mild street applications, absorption is likely negligible. Highly aggressive cam profiles and spring loads in a radical street or racing application can strain the hydraulic lifter's mechanism to the point where some performance potential is lost through absorption. Lifters with tight internal clearances and valving most accurately follow the cam's profile, and are termed stiff.

The second form of false motion is the better-known problem of lifter “pump-up.” The hydraulic lifter’s plunger is continually under hydraulic pressure from the engine’s oiling system. Under demanding circumstances such as high rpm, the valvetrain can partially unload. This unloading can occur during the onset of valve float, during spring surge, or with valve bounce on closing. Unloading can theory holds that “stiffer” is better.

At what point can instability with a hydraulic lifter begin to hinder performance? The answer, unfortunately, is combination specific. Valvetrain weight and geometry, pushrod deflection, preload adjustment, spring load, and the cam profile’s smoothness and intensity are some of the factors, along with rpm, that can upset a hydraulic lifter’s ability to maintain valve control. Even oil viscosity and temperature have been reported to make a difference.

Though there are too many variables to pinpoint the rpm capability of a hydraulic-lifter camshaft, extensive experience in the use of hydraulic cams can suggest basic guidelines. Depending upon the camshaft/valvetrain/spring combination, standard hydraulic lifters can operate effectively in the 5,500-6,000-rpm range. Typically, anti-pump-up lifters can raise the rpm potential by 500-1,000 rpm more. Certainly, some have far exceeded these numbers, while other combinations experience problems at even more conservative levels.

Solid Solution

Solid lifters are as the name implies-solid. There is no internal mechanism to take up clearance, and in fact, they require clearance to operate properly. This clearance is called the valve lash. Why, you may ask, is lash required? As the cam comes around to the base circle, the lifter must unload the valvetrain and allow the valve to close. Theoretically, this occurs at zero lash, but some additional clearance is needed to give the solid-lifter valvetrain a little wiggle room to compensate for dimensional changes due to heat expansion.

The real beauty of a solid-lifter setup is in its simplicity. Essentially, it’s a machined chunk of steel with no moving parts. There’s nothing to foul up the valvetrain operation. Set up correctly, a solid is about as reliable as a brick, because it is about as complicated as one. Sometimes simplicity is a tough attribute to beat.

The Test

Testing a hydraulic versus solid isn’t as simple as it may seem. While it may seem like just a matter of ordering solid- and hydraulic-lifter camshafts with the same specifications and running a test, there are a few considerations that are not apparent at first. Beginning with the advertised duration numbers, solids and hydraulics are rated by completely different standards. For instance, in the Competition Cams line, hydraulics are rated for duration at .008-inch lifter rise, while solids are typically rated at .020 inch.

Comparing a solid to a hydraulic by advertised duration is like comparing apples to oranges. In regard to lift, things are a little simpler. But again, a direct comparison of specs would be misleading. The lash needs to be subtracted from a solid cam’s specs to arrive at the true lift at the valve, which can then be compared to the hydraulic cam’s specs. Finally, we have duration at .050. While both types of cams are rated in the same way, for the duration at .050 spec, the numbers can’t be directly compared. Duration at .050 is measured in crank degrees at .050-inch lifter rise on the opening and closing side of a lobe.

The engine isn’t interested in how far the lifter is moved, but rather only cares what is happening at the valves. With a solid, the lash will take up some of the lifter’s motion before there is any valve motion. In fact, with the 1.6:1 rocker ratio in our test engine, the solid’s duration at .050 reads as if the duration were taken at .0313-inch lifter rise as compared to hydraulic terms. That’s a significant difference. A solid cam will behave like a hydraulic with approximately 10 degrees less duration at .050-inch lift.

All this makes it difficult to accurately match a solid- and hydraulic-lifter cam; matching the numbers in a cam catalog or on a spec card certainly can’t do it. Our hydraulic cam was one of Comp’s latest hydraulic profiles-an Xtreme Energy 275HL. These cams are ground with lobes specifically designed for high lift with a Mopar .904-inch tappet diameter. To match the fast rate of lift, we ordered a custom-ground solid cam based on Comp’s MM-series .904 tappet-diameter lobe profiles. On the intake side, we went with the 6581 lobe, with a 6583 lobe chosen

for the exhaust. The numbers on our solid cam seemed much larger in duration at .050, smaller in advertised duration, and very close on lift after compensating for lash. In fact, these two profiles were as close as we could approximate with the solid lobes available to us. We expected the idle vacuum and quality, cranking compression, and low-end output to be very similar between these two cams (see cam spec chart).

The First Big-Block Chevy … Where Were You?

Written by Brian Brennan on December 27, 2017
K. Scott Teeters - Illustrator;

It was January 1965 when Chevrolet introduced what was to become a legend … the first big-block Corvette (and the Chevelle). The L78 engine produced 425 horsepower with 396 cubic-inches, well above the mythical 1 horsepower per cubic inch standard of the day. It was introduced mid-model year of 1965 and produced more horsepower than any of the other 396 engines manufactured from mid-1965 until the 396-production ended. (The “lion” of the big-block Chevy family would be the L88 introduced in 1967 and produced in sparse quantities through 1969.)

It wasn’t until February—Sunday, Feb. 14, to be exact, at Lions Drag Strip in Wilmington, California; a few days before my 17th birthday (and to me that was one heck of a birthday present)—that I was properly introduced to the big-block Corvette. At that time, I was fully involved in drag racing with our ’57 Corvette and in a few weeks, we would win our first of three consecutive CM/S AHRA Winternationals Championships (1965-’67). Every Sunday we towed to the “Beach” and would drag race all day. By now we had a 327 topped with a Bill Thomas dual air meter prepped mechanical Rochester fuel injection unit, Engle cam, and the latest rubber from Goodyear, the now fabled “wrinkle wall” Blue Streak (and stripe) slicks (10.00×15). For the day it was a badass Corvette and it would launch and get down those 1,320 feet in respectable times … mid-to low 11s at 117 mph.

On this particular Sunday I remember seeing a Cypress Green coupe (my favorite color of the day was British Racing Green). It was a brand-new 1965 Corvette but it had something that I had never seen before resting under the hood, which was also different. The dark-green Sting Ray coupe was powered by a 396 big-block Chevy with an unmistakable “bump” on its hood and the newly minted fender badges yielding a clue as to what resided within. The black interior, as it should be on all performance cars, had the telltale sign of a four-speed and there was no doubting that this land-based rocket was placed here by the “Gods of Speed.” I was absolutely taken aback as I stood there with my eyes wide open, along with my mouth, while my hands and arms drooped downward. I had never seen anything like this in my young life and I wasn’t about to miss a thing. Talk about “eye candy.” The “Rat motor,” as it would soon become known, was massive, sitting and filling every available open spot in the engine bay. The air cleaner was off and all that I could remember really focusing on were the cavernous quadruple throat openings that made up that massive dual-feed Holley.

OFFICER/BOARD DIRECTORY

POSITION	NAME	PHONE NUMBER	E-MAIL
President	George Masters	240-6771	gem@min.midco.net
Vice President	Detrick Thomas	240-7295	dee_thomas1977@yahoo.com
Secretary	Pricilla Jevne	720-8058	pljevne@yahoo.com
Treasurer	Cara Olson	721-1627	clolson2144@hotmail.com
Newsletter Editor	Tammy Kloehn	721-5345	tammykloehn@yahoo.com
Board Member	Brian Olson	509-6978	bdolson81@yahoo.com
Board Member	Craig Eraas	721-5500	craig.eraas@gmail.com
Board Member	Greg Olson	721-5531	gominot@yahoo.com
Board Member	Steve Smith	833-3434	scsmith@.com
Board Member	Doug Frazier	721-7203	badss@aol.com
Webmistress	Sherie Saltveit	721-7501	sjsaltveit@hotmail.com

WEBSITE ADDRESS: www.dakotacruiser.com

---

(701) 852 - KARS

ADDRESS CORRECTION SERVICES

800 31st Ave. S.E., Lot 900, Minot, ND 58701

Next General Meetings
at the Vegas:
Jan 3 & Feb 7, 2018