



LINE - LOCK

**Northstar Chevelle
Club Newsletter**

Editor: Zman September 2009

MEMBER PROFILE TERRY DIDION



My story starts in 1970. At that time I was interviewing for (2) jobs following college graduation. One job offered a company car and the other one did not. In April of 1970 I went to Polar Chevrolet in White Bear Lake and drove a 4-speed SS 454. I loved the car and decided I would buy it if I got the job without the company car. I ended up with the company car job and bought a motorcycle instead.

Fast forward to 2002 at which time my son Marcus took a year off of college to be a ski-bum in Vail, Colorado. Over the years we had been to many car shows and owned a 1992 Mustang LX 5.0 convertible. I had told my son the story of the 1970 Chevelle SS 454. One Saturday evening he called from Vail, where he was working as a waiter. A fellow he worked with was complaining about an old car he had to sell. It seems this fellow had bought the car in the early 1980's in southern California and intended to restore it, but before he got very far he blew up the engine. He then got married and moved several times taking the car with him. He ended up in Vail

working with my son. By that time he has 2 kids, a wife and very little extra money. He was living in a development that had 2-car garages and no other cars were allowed on the driveway. He told my son the car was a 1970 Mailbu, 2-door, but it had no motor, transmission or hood, but was rust-free with a clean California title and plates. He wanted \$500 for it. I purchased it right away over the phone that night and drove out a few weeks later to pick it up.

In restoring it, I knew we did not have any paperwork or documentation other than the information on the VIN plate. That told me it was a 1970, V8, built in California and the original color was Fathom Blue with a Blue interior. At that point I decided to build the car the way I wanted and make it a driver. I secured a 4-bolt 454 block and had it built to 490 HP, yet would run on 92 octane unleaded gas. I purchased a new M 22 "rock crusher" 4-speed transmission from Cheney Performance and over the years secured most of the other parts needed for the restoration. I also decided to add A/C and installed "Vintage Air" that ran off the original dash controls. I also put on 15" SS rims and radial tires, with wider tires in the back. Lastly, I put in a large aluminum radiator with twin fans and removed the original fan from the motor. I did have the car painted the original Fathom Blue but went with the pearl white interior and white hood and trunk stripes. The work started in the fall of 2002 and the car was done in the spring of 2008.

- Terry



MINNESOTA'S '64 - '72 CHEVELLE AND EL CAMINO CLUB



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SHOP TALK

In this article we will cover chassis components that are commonly interchanged. Most are A-frames, trailing arms, and rearends. Also included are steering components from other vehicles, chassis lines and years that will retrofit and function as original. NOTE: some of the data might be incomplete so member feedback is encouraged. Source "Inside 64 - 72 A-Bodies, Car Craft, March 1998".

REAR END HOUSINGS

From 1964-67, Chevelle rearends were manufactured by the Chevrolet Gear and Axle Division. The housing dimensions measure 56.5 inches, from flange to flange. Total measurement with the drums in place is 60.5 inches. The dimensions are similar to the 1967-69 Camaro, Firebird and 1968-74 X-cars and clones, except leaf springs were used. From 1968-72 rearend housings measure 58.5 inches from flange to flange. With brake drums in place, the total dimensions measure 62.5 inches. The dimensions are similar to the 1970-81 Camaro, Firebird and 1975-79 X-cars and clones, except leaf springs again were used. Internal components have a common characteristic to the housing used. 10 bolt pieces fit other 8.125" 10-bolt housings (the rearend used in Chevrolets) and 12-bolt pieces interchange with other 12-bolt housings (not ones from the Chevrolet pickup or Oldsmobile which have a 12 bolt cover and a 10 bolt gear, which measures 8.3"). This means that a positraction carrier will retrofit in place of a standard differential. Axle shafts are common to the housing used and, due to the usual characteristics like overall length and spline count, the shafts only interchange with the housings that are used. (e.g. 12 bolt shafts fit other 12-bolts, and 10 bolt shafts fit other 10-bolts.)

Rear spring mounting pads differ depending on which 1964-66 rearends used a flat pad with a hole drilled in the center. 1968-72 rearends have circular spring mounting pads, which are 3/4" higher than the early flat pad. 1967 was a transition year in which A-cars might have a 1964-66 style rearend, a 1968-72 rearend (which is wider, and commonly available), or a "hybrid" rearend, which will have the 58.5" width, but with the early spring mounting pad and trailing arm brackets. Rear upper control bushing eyes and their positioning will differ. 1968-72 rearend housings will have a 3/8" forward positioning, which is farther than the 1964-67 rearends. 1964 was the only year that the rearend bushings are small and any upper trailing arm (from any GM division) will fit 1964 rearend housings.

REAR TRAILING ARMS

The rear trailing arms (or control arms) consist of four arms that connect the rearend to the frame. The setup consists of two long and two short arms. The lower trailing arms used with sway bars are unique. The usual characteristics is that the arm is boxed and gusseted. The upper arms vary. There are two part numbers in the Chevrolet Parts Interchange Manual that separate 1964-67 from 1968-72 Chevilles and BOP A-Bodies. The lower arms are interchangeable (all years) and cars that did not have a sway bar can be modified to accommodate one. 1973-77 lower rear trailing arms will bolt in if using either 1973-77 rear anti-sway bars or 1977-96 B-car sway bars; common on vehicles like Cadillac limos and police-optional Caprice 9C1s. 201, 1965 Chevelle SS 396s (RPO Z-16) had unique lower arms, which is a one-year item.

Upper trailing arms of 1964-67 vintage, interchange. They are 1" shorter, which will not fit into 1968-72 A-cars, which have longer upper arms. When switching upper arms, care must be exercised since the pinion nose angle



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might be affected. According to *Inside '64 -- '72 A-Bodies*, there are 10 different rear upper control arms offered. Other characteristics include clearance bulges, common with 12-bolt differentials in A-cars, and adjustable upper arms, optioned on Oldsmobile A-cars (F-85, Cutlass). 442s had boxed upper arms, and this is a sought-after item in a restoration. On 1968-72 high-performance, 4-speed, A-cars, Monte Carlo's and Grand Prix's, there is a triangulation brace bracket that is standard. This stiffens the chassis. Tubular versions are available from Edelbrock and Hotchkis Performance. The trailing arms fit either side which means that the left upper arm will fit on the right, and vice versa.

FRONT CONTROL ARMS

Most control arms for the 1964-72 Chevelle interchange. However, the lower control arm used for the front suspension had distinct features. One version, produced from 1964-66, utilized 1.90" (1 5/16") diameter bushings. There are two arms used from 1967-72. They include the LCAs with round bushings, 1.625" diameter, commonly found on 1968 (all models) or 1969-72 vehicles like the Chevelle SS, Pontiac GTO, Oldsmobile 442, and Buick GSX. Most of the lower control arms used on the other A-cars had oval bushings. The lower arm bushings are located in the rear pivot area on both sides of the car. TRW or MOOG manuals call these the rear control arm bushings. All oval bushing arms are 1.90" and 1.625". Round bushing arms are 1.625" and manufactured 1.375" diameter front bushings. Lower arms interchange as an assembly, regardless of the spring diameter (that distinguishes 1964-67 and 1968-72 front springs). You can use a later arm on early models (1964-67) but use of a 1.90" lower arm on a later A-body is unknown. Note: lower arms

may differ; replacement or factory mismatches are common. Thus keep this in mind when locating the correct lower arm for your restoration project. The only problem with oval bushings is that the existing bushing cans will have to be reused. Aftermarket companies that use solid or Del-A-Lum (a Global West product) bushings as replacements, might require locating a set of round bushing lower arms, either a 1.90" or 1.625". Upper control arms, for Chevrolet Chevelles and El Caminos, had crossshafts that used bolts to secure the cup washer to the bushing. BOP A-Bodies used crossshafts with threaded ends and locknuts. Due to the possibility of frame spread, MOOG or TRW manufactures an offset control arm shaft that allows the camber angles to be corrected via OEM specs.

FRONT SPRINGS

Springs vary with application and chassis packages with one important note. 1968-72 A-cars have a different front spring diameter when compared those from a 1964-67 model ("Knuckle Sandwich", Hot Rod, June 1987). 1969 springs are based on computerized data results concerning chassis packages and body styles. The spring rates do vary depending on whether a softer or stiffer ride is preferred. Note: 1964-67 front springs can be found on 1967-69 Camaros and 1968-74 Novas. 1968-72 A-body front springs are used on 1968-70 BOP full size cars. In all cases, the spring rates again will differ depending on ride quality desired.

REAR SPRINGS

Data that is true for front springs applies to the rear springs as well. 1964-67 rearends have provisions for bolting on the spring to the pad. Another difference is that 1964-67 springs are pigtailed on one end only. 1968-72 rearends use a cup, and is flanged to hold the spring in place.



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FRAMES

The A-body frame, unique to the Chevelle and their BOP counterparts, is a unique design which has been used by other auto manufacturers. Since the late 50s, GM used an X-frame design that had little concern for side impacts. This design was used on full size cars (like the Impala) and this utilized a three-link rear suspension that had two long lower control arms and a third link. Ford Motor Company had a frame design that was far more superior to the GM design with the side frame rails positioned outward. The entire frame, if looking underneath a 1960-64 Galaxie 500, is a modified ladder frame. Leaf springs were used at the rear. This design was the foundation for the perimeter frame which came later.

The perimeter frame, which was an improvement of the ladder frame, utilized an independent front suspension. This was a major design change for the A-car. A full, rectangular, perimeter frame placed an emphasis on safety (like side impact collisions). Another design feature was the use of four trailing arms and coil springs. This resulted in a softer ride over a leaf sprung car or truck. The year following the introduction of the GM A-body, other manufacturers (like Ford) incorporated this design. All full sized GM's (except the Buick Riviera) used the new design.

The four-link trailing arm suspension (from the GM A-car) was also incorporated on 1978-present Ford FOX-platform vehicles and the 1985-97 Ford Aerostar minivan. Also the 1979-present Ford full-size vehicles (LTD, Crown Vic, Grand Marquis, and Town Car) had the GM-patented 4-link incorporated in their production vehicles. Note: the rear trailing arms are different on the upper links and they are bolted to the axleshaft. This is common with 1965-70 GM full size vehicles and 1965-79

FoMoCo full size and 1972-79 FoMoCo intermediates.

Since the GM, A-car line was aimed at a different audience, the midsize came into play for buyers not desiring a full size car or a compact. 1964-67 A-bodies used the same frame design but different models and body styles utilized various body mounting methods. All frames had a 115 inch wheelbase which is similar to the 1955-57 Chevrolet. 1968-72 frames had two different wheelbases, a 116 and 112 inch wheelbase. Sedans, station wagons, and utilities (like the El Camino) used a 116 inch frame. The frame is interchangeable, except that the sedan had non-boxed rails. The hardtop and convertibles used a 112 inch wheelbase version and all models (except for Pontiac 455 powered hardtops and convertibles) interchange. The convertible utilized a boxed design for added strength. 1969-72 Grand Prix's and 1970 Monte Carlo's used a modified hardtop frame. The only design difference is that the front wheels were moved four inches forward from the traditional position on the other vehicles (hardtops and convertibles). The engine and transmission position remained in the same place but resulted in the combo positioned behind the front wheels. The frame's wheelbase dimensions measures 116 inches and this frame design is exclusive to the Grand Prix or Monte Carlo. The 1969-72 Grand Prix was designated as a "G" body by the Fisher Body division but A-car suspension components are used. The Monte Carlo was designated as the "A-Special" series; the official use of the G-car designation introduced in 1982. Today, only the Ford Motor Company still manufactures full perimeter framed cars. GM phased out production of the traditional, full perimeter, rear wheel drive family sedans, hearses, and limousines in 1996. It seems that everyone was drawn to the SUV, front wheel drive cars which GM implemented to boost sales. -Zman



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CAR SHOWS

MINNESOTA

Wed, Sep 2	West Concord	Woody's Hump Day Cruise In
Sat, Sep 5	McGregor	21st Annual - "Wild Rice Days" Car Show
	Hastings	2009 Historic Hastings Saturday Night Cruise-In
Sun, Sep 6	Blaine	Twin Cities Collector Car Show and Swap Meet
	Maplewood	Heavy Hittaz 1st Annual Acapulco Showdown
	Maplewood	Acapulco Showdown
Mon, Sep 7	Hugo	9th Annual Labor Day Car Show
	Duelm	TOP 50 CAR SHOW
	Cloquet	Cloquet's Labor Day FREE Car Show
Tue, Sep 8	Champlin	5-8 Grill & Bar Tuesday "Cruise In"
Wed, Sep 9	South Haven	Moms Place Cruise Night
Thu, Sep 10	St. Stephen	Trobec's Rib Fest & Car Show
Fri, Sep 11	Jordan	Jordan Heimatfest Classic Car & Cycle Cruise
	Shakopee	Friday Evenings Minnesota Valley Rally - Shakopee
Sat, Sep 12	Hastings	Prescott Daze Car Show
	Bloomington	15th Annual St. Bonaventure Car Show & Fall
	Northfield	18th Annual Defeat of Jesse James Days Car Show
	Linwood Twnshp	4th ANNUAL LINWOOD FAMILY FUN DAY CAR SHOW
	Palmer Twp.	Palmer Day Top 20 Car Show
	Apple Valley	8th Annual Tomahawk Chapter Fall Car Show & BBQ
	Watertown	Crow River Rumble Car Show and Cruise
	Bloomington	St. Boni's Fall Festival Car Show
	Walker	17th Annual "No Class" Car Show
	Buffalo	Classics By The Lake
	Carver	Carver Steamboat Days 8th Annual Car Show
	Brooklyn Center	LUCKY 21 SHOW
	Excelsior	4th Annual Westwood Car Show
	Brooks	"BLAST TO BROOKS" AUTO SHOW
	Maple Grove	Lookout Bar and Grill Trophy Car Show
	Isanti	Hot Dogs, Hot Rods & Burnouts at Hideaway
	St. Paul	Saturdays in Downtown St. Paul 2009
Sun, Sep 13	Little Falls	Lone Eagle 35th Annual Car Show & Swap Meet
	Apple Valley	4th Annual Fall Ford Show SVTOATC
	Inver Grove	Inver Grove Heights Days 17th Annual Car Show
	Wayzata	WAYZATA CHARITY AUTO SHOW
	Oak Grove	St. Patricks Countryfest



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CAR SHOWS (CONT)

MINNESOTA (cont.)

Mon, Sep 14	Brainerd	Driver School & Lapping
	St. Paul	Wing's Cruise or Fly In
Wed, Sep 16	West Concord	Woody's Hump Day Cruise In
Fri, Sep 18	New Prague	CLASSIC CAR CRUISE
Sat, Sep 19	Walker	FALL HAS IT ALL TRAVELING CAR SHOW 2009
	Richfield	Cattail Days Car, Tractor & Motorcycle Show
	Waconia	24th ANNUAL NICKLE DICKLE DAY CAR & TRUCK
	Floodwood	16th Annual Floodwood Fall Color Festival Car Show
	Owatonna	3rd Annual Night Owls Fall Festival Car Show
	Waseca	Club 57's 4th Annual Classic Car Show
	Mounds View	Farewell to Summer Car Show
	Roseville	ALLFORD/MERCURY CAR SHOW AND SWAP MEET
	Roseville	ALL FORD/MERCURY TOP "21" SHOW & SWAP
	Otsego	Otsego Festival Car Show
	Belview	15th ANNUAL OLD SOD DAY CAR SHOW-N-SHINE
	Big Lake	KJ's REFUGE 8th ANNUAL CAR SHOW
	Inver Grove Heights	Hot Cars & Sexy Betties Minnesota's hottest car
	Bellingham	13th annual car show
	Hastings	2009 Historic Hastings Saturday Night Cruise-In
Sun, Sep 20	Champlin	Cruisin' with Culver's
	Hugo	22nd Annual Northern Lights Pig Roast and Car Show
	St. Peter	33rd Annual Car Show & Swap Meet
	Maplewood	St. Jerome's Fall Festival
	Big Lake	Big Lake Car Show
	Brooklyn Center	Malmborg's Top 21
	MPLS	TOP 21 SHOW
Fri, Sep 25	Mahnomen	2009 Casino Car Cruise
	Shakopee	Friday Evenings Minnesota Valley Rally - Shakopee
	Touring St. Croix Valley	Poker Run For Charity
Sat, Sep 26	Crosslake	Crosslake Days Classic & Custom Car & Bike Show
	Lake Park	9th ANNUAL PUMPKIN FEST CAR SHOW
	Wyoming	Wyoming Stage Coach Celebration
	Fridley	Classics on Broadway Car Show
	Nowthen	Nowthen Heritage Festival Car Show
Mon, Sep 28	St. Paul	Wings Cruise or Fly In



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CAR SHOWS (CONT)

WISCONSIN

Sat, Sep 12	Prescott	Prescott Daze Car Show
	Glenwood City	CAR SHOW
Sun, Sep 13	Barron	Barron Fall Fest
Sat, Sep 19	Hudson	Midwest Studebaker Only Swap Meet
	Spring Valley	Spring Valley Dam Days 10:00am - 3:00pm
	Ellsworth	www.jwkaladis.com

IOWA (Dan & Derek, these are for you)

Sat, Sep 12	Northwood	6th ANNUAL ARISTOCRATS CAR SHOW
Fri, Sep 18	Des Moines	Des Moines Auto Parts Swap Meet
Sat, Sep 19	Osage	Blacktop Cruisers
Sun, Sep 20	Estherville	AIRPORT DRAGS

PREZ MEZ

First, I extend my appreciation and thanks to everyone who showed up for the car show and to all those who helped out. I know this show can and will be better next year. **We just need more club members to help promote it.**

Summer is closing fast and it is time for our annual fall picnic. As Chris has mentioned below, I will be hosting the event at my home. We hope to see you there and do use this event to get pictures of you (and your loved one) with your ride for upcoming member profiles section. Please let us know if you are going to attend and how many you will be bringing. This is not a meeting, it is a get together for all members and family.

Fall cruise. Let's show the southern part of Minnesota what a cruise looks like; with a lot of our chevilles attending. I'm not sure yet what we are doing or where we are going. Please read and put your suggestions on our website.

For any new members that did not get their club T-shirt, let Rick know and he will send it out.

I have incorporated suggestions from responses to our August newsletter. As you can see, Zman has included a CAR SHOWS section to list events of interest to our membership. For our October newsletter, I have asked him to include only the links to web sites listing these shows (to cut down on newsletter pages) and post only those events of particular interest to club members in the newsletter.

I will be putting "Northstar Chevelle Club Newsletter" in the email subject line to distinguish it from spam.

I would also like to keep the newsletter to six (6) pages or less but your thoughts and suggestions on length and content are more important; so please share them with me or other officers. I want to ensure this newsletter is of value to you.

As you now know, we plan on issuing this newsletter monthly. My plan is to make sure it becomes our main member link especially during the non-driving season.

Finally, Thank you for your suggestions and positive responses.

- John Sinna



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VICE PRESIDENT REPORT

Ok, not to address this to anyone person but I'm always saying don't put our Club Business on our website so the whole world knows our business. I've been a President, a Vice president and a Sergeant at arms at all three clubs I've joined. With the last club, I was an officer for years. Now it seems a lot like babysitting, being a parent, a teacher and yes, even a mother. Not what your expecting I'm sure.

But that's what comes with the job; I excepted and accepted that. What I can't except is that we want our club to grow into the states number 1 club; where guys and gals say "wow man, they have one the nicest clubs around here; nice people plus they have their proverbial Stuff together". Well we don't!! Not yet anyway. When we hold an event, the membership is suppose to support the club. I don't see that so much; we have held car shows before.

Before I was a NCC member and had my car running, I had heard that this club held two shows at chevy dealerships. Well it looks like the club didn't learn too much from that because the show last Saturday was just OK. Not enough of OUR MEMBERS showed up to help out. Its always the same dozen or so members that do it all. We have members that have no cars that are streetable and they show up ALL the TIME. THANKS. Ian, Chris, Jammie, you guys are the backbone of this club. Derek, who drives 2 hrs or more to show up, thank you as well; that means a lot.

Look, we have two club events a month. That's "2" things in 30 days. And out of some 75 members that are in the club, we get 7 cars. That's crazy. Then I hear members say "well this car show is closer to home". What are we to do, hold events in your backyard? Is it too far to drive to support your Club? Its a car, drive it. That's what I thought you got your car for; to DRIVE IT. If you don't want to be in this club to help out, then why did you join?

For a T-shirt, a sticker? Hell you can buy that stuff any where. You joined, I hope, to be a part of NORTHSTAR CHEVELLES. Well I thought that's why you did.

I hear the same excuses all the time. Well I have this going on and I have that; yeah right. That doesn't cut it any more. "What" some of you guys just want is to throw \$ 24.00 at us for a reason I don't totally understand. Although you membership funds help, WE NEED YOU and YOUR CHEVELLE. That's all we ask. I don't expect everyone to show up all the time. Even once in 60 days would be great. That's one event in two months. That would floor me and a few other officers. Since January of this year, we have made great strides to become the club we are today.

Look, I like joking around more then most and get it back in return. I love that part of it. I do that that cause its me and I like being around you animals. I like the responses I get from you and its great to see that I can make a few of you laugh and smile (the pink scarf thing, the small V8 in my car, the old man thing, you know). Its all great stuff.

But this is where I get a little concerned. Ask yourself, how many things did I do with my club this year? Out of 365 days, how many days did I show up? Look, there only 60 more days, give or take, for our driving season. Come on, bring it out before its time to put your prize possession away for 6 months. You newer guys, with your beautiful cars who like to show them off, that's all well and good. But show them off for and with us.

So if I've hit a nerve; Good. Think about it. If you have something to add or your disagree with me; I'm here! E-mail is a good way to get a hold of me, or call your CONCERNED VP.

P.S. This isn't meant to piss anyone off. This is meant to MAKE you THINK. Thank you for understanding.

- Rick (COG)



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CLUB EVENTS

NCC Picnic - Here is our next event. Its September 19th at John Sinna's home starting at 2:00 p.m. This is our fall family picnic and barbeque. Its a potluck event and the club will provide burgers and brats. There is a post running on the forums right now to figure out who plans to bring what, as far as a dish, so that everyone doesn't bring the same thing.

- Chris Reid

NCC SHOW

