



## Mopar Muscle Cars of Austin

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### Random Thoughts & Club Happenings

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Happy February, all. I would love to talk about all the “off season” projects going on, but with the warm weather lately it hardly seems like the “off season!” Spring is not too far away, and with it come car shows and events. The first of these is one that I can enthusiastically recommend based on my experience last year: the Houston- San Antonio- Austin (and maybe as far away as Dallas) Mopar clubs joint cruise and picnic in Bastrop. Last year we had plenty of cars, plenty of sunshine, and a great Saturday together. The dealership in Bastrop cleared the front of the lot for us (and we still spilled out onto the embankment of Highway 71), and plenty of admirers came through to look at the cars. But the most fun was getting to “kick the tires” and tell tall tales with the Houston and San Antonio folks. The picnic in the park afterward was also a treat. If you didn’t get a chance to go last year, do whatever you can to be there this year! Its scheduled for Saturday, March 27. Full details are in the Calendar of Events section of the newsletter. Hope to see you there!

Steve Lacker

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# Feature Article

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This month, I'm pleased to announce the return of the Feature Article. In plain English, that means someone finally gave me something to put in the newsletter. In this case, it's Steven Dykes with a discussion of tire sizes and upgrades.

**The Shoes Don't Make the Man...  
But the Tires Can Make the Car  
(Run!)  
By Steven Dykes**

If you're looking for some discussion of the relative merits of one brand, type of construction, or coefficient of friction; you're going to have to look elsewhere. What the article discusses is how the size of the tire, generically, affects acceleration. It also looks at the relationship of tires and axle ratios to performance.

It is amusing to read in the fan magazines how a reader pumps big bucks into his ride, only to find it slower than before. A couple of times I have seen the reader include reference to fitting larger tires. What's happening?

Everyone knows that changing the rear axle gear ratio affects acceleration. The fact is that anything that affects the engine revolutions per a given distance affects the application of power to the pavement. Tires are constructed according to proportions. A wider tread section necessitates higher section height at the same aspect ratio. A 235/70-14 stands taller than a 195/70-14 tire of the same model, even though each is mounted on a 14 inch wheel. The taller tire requires fewer revolutions to cover a given distance. The results of juggling tire sizes and rim diameters can be calculated with a reasonable degree of accuracy. Changing the tire size and rim size can have a dramatic effect on performance.

However, a lot more than simple engine revolutions per a given distance must be considered when trying to improve acceleration. Rather than turn this into a graduate physics

paper, a few assumptions are going to be made. (I really appreciate the efforts Mopar Performance went through to put together the recommendations they make to produce a 12.0 second small-block car. Their recommendations are made with some hard data to back them up.)

The approach I took was to see what rear axle ratio and tire combination would preserve the engine revolution per mile number to use as a baseline in determining what other changes I would make. Here are some of the planning parameters I used:

- Maximum engine speed: 5500 RPM - Heads don't flow any better at higher RPM.
- Minimum tire aspect ratio: 60 series - Cost consideration, lower is more \$s
- Maximum wheel size: 15x8, 4.5" backspace Largest rim that will fit in the fender with 235/60 tire mounted.
- Maximum tire size: 235/60-15 - Largest combo to fit in fender without the tire being used as a bump or steering stop.
- No custom axle ratios - \$s
- Target maximum speed: 130 mph - Higher requires V or Z speed tire rating.

**Assumptions:**

- This is a road car. Balance acceleration and economy
- Engine has enough power to pull maximum rpm at or below target maximum speed given specified rear axle and vehicle aerodynamic qualities.
- There is no slippage from torque converter above stall speed.
- There is no traction problem.

The car I am using is a 68 Valiant automatic that I'll be putting a 318 into. Starting with the original equipment as a base line, I developed the following table.

	Stock	Suggested Metric	Metric	Oversize	Add 1" rim	Add 2" rim	What if?
Wheel Size	<b>13</b>		13	13	14	15	<b>15</b>
Tire Size	<b>6.50</b>	175.1	<b>175</b>	185	195	205	<b>235</b>
Profile (Series)	<b>82</b>		75	70	60	50	<b>60</b>
Rolling Circumference (Inches)	74.33		73.31	72.88	72.92	72.48	82.00
Wheel Rev per mile	852.41		864.30	869.43	868.84	874.18	772.65
Rear gear ratio	<b>2.93:1</b>		2.93	2.93	2.93	2.93	<b>3.23</b>
Engine Rev/Mile	2497.57		2532.39	2547.43	2545.71	2561.34	2495.67
Speedometer Error			-1.39%	-2.00%	-1.93%	-2.55%	0.08%
Actual when Meter is <b>70</b> MPH	<b>70</b>		69.024	68.602	68.651	68.212	70.053
Speed (MPH) at <b>5500</b> RPM	132.129		130.312	129.542	129.630	128.839	132.229

The items in bold print are those that can be changed without disturbing any mathematical relationships. The “What If?” column is set up to allow a free form input to see what results from a specific wheel tire combination. The example in this table preserves the original engine speed to road speed relationship in the “What If?” column. In this case, any improvement in the acceleration of the car is going to be a result of what happens under the hood.

Do I really think the original 225 in this car would produce 132 mph? Not a chance, this

car is drag (aerodynamically) limited. Can a modified 318 with the tire/axle combination specified produce 132 mph in a '68 Valiant? It will be close.

For a competition vehicle, economical operation is a secondary consideration. There are some difference between considerations between pure acceleration trials and speedway or road course competitions. Still, this chart can be of some use. It can be used to determine a tire/axle combination that will produce maximum velocity at the fastest part of the course.

Going back to the hapless person who puts money into the engine room and tires. Most of the engine work is going to force the power to come in at higher engine speeds. Power is going north while the need is going south with the larger diameter tires. A comprehensive look at engine and tire modifications will point up what needs to happen with the rear axle ratio in order to get closer to the desired results.

You could develop this chart for yourself. None of the calculations is particularly difficult. Or you can e-mail [suzi@sprynet.com](mailto:suzi@sprynet.com) and get a copy in a low grade PC version of Lotus 1-2-3. If you're using something else, let me know. If I can match your software, I will.

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## Local Activities

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Feb 3, Kars for Kids Planning Meeting, 7 PM at ASI Corporate office 4513 Burlison Rd.

Kars for Kids is going forward despite the change in organizers. The new organizers are asking for volunteers and input toward planning this year's show.

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# CALENDAR OF EVENTS

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Feb 13-14 Conroe, TX 4<sup>th</sup> Annual Winter Conroe Swap Meet. Info: 254-719-2990 or 254-859-5364

Feb 26-28 Decatur, TX 24<sup>th</sup> Annual Wise County Antique Auto Swap Meet Hwy 51, 1.5 miles south of junction 287&51 General info: Decatur Chamber of Commerce (940) 627-3107

Mar 14 1999 San Jacinto Battleground, Houston Old Car Picnic

Mar 27 Bastrop TX Texas Mopar Clubs Joint Picnic! Houston, San Antonio, Austin and Dallas Mopar Clubs meet in Bastrop, TX at about 10am head to a picnic area at the State Park. More details as plans are finalized

Mar 23-25 New Braunfels TX New Braunfels Swap Meet, New Braunfels fairgrounds, Info: 830-572-2626

Apr 29-May 2 Fort Worth, TX Spring Pate Swap Meet Texas Motor Speedway

May 8 Austin, TX 11<sup>th</sup> Annual Kars for Kids Sonic Drive-in at 134 E Riverside Drive

June 5-6 1999 Boerne, TX Dodge Charger Meet info: Wes at (210)493-0750

July 23-25 Fredericksburg, TX Fredericksburg Swap Meet & Craft Show, Lady Bird Johnson Park, info: 915-388-2223

Sep 25-26 Houston, TX Tenth Annual Houston Mopar Show and Race at Houston Raceway Park.

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# Wanted

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Schumacher/Creative Services 6 to LA V8 kit

73 + A-body 8\_ or 8.75 rear axle assembly – 3.23 or 3.55, serviceable, SG preferred

73 + Disk Brake Master Cylinder & lines through proportioning valve.

Disk Brake setup for A-body

73-76 A-body calipers, caliper adapters, splash shields, lower control arms w/ sway bar tabs.

Tuff wheel

4 Cop car wheels

Battery trunk mount conversion

LA V8 electronic distributor, control module and wiring

OE un-silenced air filter assembly for Carter TQ

LA engine gaskets, bearings, timing chain

**Call Steven Dykes (512) 218-4752**

12/98

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## WANTED

FOR 1967 GTX RADIATOR #2785934

CALL **TERRY 'E BODY' SIEGMUND (512)451-1454** 12/98

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B-body big yoke 3.23 SG rear end for a 73 Satellite, Rallye hood or 6-pack hood for a 73 Challenger, Console mount for cassette player. Call **Mike Cox, (512) 303-3100**

12/98

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Taillight Assemblies for 1968 Barracuda. Call **Mike Mosley, (512) 832-5270** 12/98

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# For Sale

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**Mopar Muscle Cars of Austin 10<sup>th</sup> Anniversary License Plate Frames.** These are metal frames with black-on-white lettering. Frames are now officially real cheap!. Contact **Harry Amon (512) 345-5832** and he might just give you a pair (or charge \$5 each, \$8 for a pair).

12/98

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**For sale or trade:**

OE spreadbore 4 bbl manifold for LA V8 – EGR plugged

9” K&N air filter assembly – Fits squarebore 4 bbl carburetors – NEW

(Element used in assembly below lowers cover 3/4 inch)

OE Chrome, un-silenced air filter assembly for 273 4 bbl w/o CAP

OE 2 bbl manifold for LA V8 – No Smog

Hurst Competition Plus 4-speed shifter mechanism – needs overhaul

Hurst 4-speed installation kit for A, F, & J-body – NEW

Rectangular floor shifter boot and trim plate for cars w/o console – NEW

M/T cast aluminum valve covers for LA V8. Will not fit adjustable rocker arms.

Small valve (1.78/1.5) LA V8 cylinder head assemblies (2), good valves & springs, approx. 75K miles, does not have hardened valve seats.

Plug-in trailer wiring tap for 95-96 Ram or Dakota – NEW

Schumacher S6 to B/RB – mounts and isolators. – NEW

OE '68 Mopar AM radio, thumbwheel controls

**Steven Dykes- (512) 218-4752**

12/98

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-1970 383 HP engine- \$300

-18-spline 4-speed trans- \$400

-23-spline 4-speed (close ratio), apart- \$200

-Aluminum bellhousing- \$150

-Big block heads, 2 each 906, 915, 452, 346 castings



-Exhaust Manifolds for 70 E-body 383

-MP parts, never used, call for prices (want to recover investment- less than what MP charges now!): 509 cam, adjustable pushrods for 440, rocker arm package, roller timing chain, chrome rocker shafts, MP distributor for 440, 933 valve springs.

Call **Isaac Jackson (512) 282-6261**

12/98

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73 Dodge Challenger rolling body w/ NIB trunk floor- \$1000

E-body parts:

non-air dash pad, very good condition- \$100

(2) Rallye guage sets w/ wiring- \$100 each

(2) Standard guage sets- \$50 each

Interior panels, black, fair condition-\$125

Compete front header panel w/ grille- \$100

Front bumper- good- \$75

Doors w/ glass, L&R, interior and exterior trim, \$100 each

LA engine purple cam, .284, NEW in box, \$100

Small block 6-pack setup, \$500

3-speed manual trans w/ shifter- \$35

(2) 73 Challenger Taillight assemblies- \$100 pair

Make offer for all of above Call **Mike Cox, (512) 303-3100**

12/98

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340 Windage tray, used large and small Rallye Wheel centers (both styles), 71-74 driver's side 340 HP exhaust manifold, 360 Thermoquad intake, 3 small bolt pattern mag wheels with tires, 4 used 205/70-15 tires, A-body front and rear sway bars. **Harry Amon (512)345-5832**

12/98

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**For Sale:**

**20 GALLON SHOP PARTS WASHER**

ALUMINUM RIGHT ANGLE OIL FILTER ADAPTER FOR SMALL BLOCK

360 ELECTRONIC DISTRIBUTOR

70-74 CUDA REAR 1/4 GLASS W/REGULATORS

MANY OTHER 'E' BODY ITEMS !

**Terry (512) 451-1454**

12/98

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**1972 Plymouth Satellite.** 360 CID 2-bbl, auto, complete, great interior, excellent chrome, road wheels, dual exhaust **Enrique Guerra, 512-388-7942**

12/98

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**Parting out 400 mopars,** 1953 to 1976, southeast of Austin. Open Saturday and Sunday. 512 376 6727 ask for Wendell.

1/99

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