

1988 Chevy Camaro, SCCA American Sedan (AS)

HISTORY

- Prior history: IMSA Firestone Firehawk Endurance Championship (built and prepared by Main Line Racing, Grand Sport GS class); converted to SCCA American Sedan by Ross Murray
- I've owned since 2005 and won 2005/2006/2007/2008 SoPac Division National Championships, and of the (4) SCCA Runoffs races I entered the car finished 3rd (2006), 2nd (2007), and 7th (2014)
- Current AS lap record holder at Auto Club Speedway and (8) Buttonwillow racetrack configurations (California)

Chassis

- 1988 IROC-Z Chevrolet Camaro
- Welded subframe connectors by Ross Murray
- SCCA legal 1.5" dia lightweight/high-strength alloy steel (chromoly) roll cage by Ross Murray
- Alloy steel (chromoly) triangulated front strut tower brace by Ross Murray
- Car weighs 3,039 lb without driver, fuel, or ballast; as-is min weight for this car + driver = 3,300 lb

Engine

- Phil Harper Motorsports 310 cu in engine, 454 hp, 381 lb-ft torque (dyno sheet after purchase)
- Crane billet camshaft, Scat forged crankshaft, JE pistons, Callies connecting rods
- Nickel alloy narrow bore GM bowtie block
- Spec Edelbrock Performer RPM intake manifold
- Edelbrock spec SCCA American Sedan aluminum heads with Jesel shaft rocker arms
- Stef's Fabrication Specialties custom aluminum oil pan
- Remote oil filter, all braided stainless lines

Ignition

- MSD-6AL ignition control module with MSD coil
- MSD Pro Billet distributor
- MSD Cap-A-Dapt distributor cap (converts small diameter GM cap to larger diameter Ford cap)
- Optima Yellowtop sealed battery
- High-torque, low profile starter

Cooling

- Ron Davis Racing Radiators custom dual pass aluminum radiator
- Stewart Components water pump
- Moroso aluminum expansion tank with stock plastic overflow reservoir
- Water line plumbing made from custom mandrel bent aluminum tubing with silicone connectors
- Setrab air/oil engine oil intercooler with 1-way check valve for Accusump effectivity
- Earl's air/oil power steering fluid cooler

Exhaust

- Burns Stainless custom equal length primary Tri-Y headers with ceramic coating, custom Y-pipe with Burns Stainless collector (total header & Y-pipe cost \$5,000+)
- Bassani custom stainless steel 3-1/2" exhaust from Y-pipe to rear bumper (new)
- Bassani stainless steel sprint car muffler (new)
- Assorted muffler tips to direct exhaust straight back, left, right, or down

Driveline (transmission, driveshaft, rear end)

- World Class T-5 transmission (rebuilt by The Gear Box Transmissions) with Hurst Billet Plus shifter
- Lightweight aluminum bell housing with SFI rated Kevlar blanket
- Inland Empire Driveline custom aluminum driveshaft with new front/rear U-joints (new)
- Coleman lightweight, gun-drilled high strength rear axles
- Coleman IMCA full floating lightweight rear hubs
- Ford 9" rear end with the following 3rd members (gear ratios):
- 3.5:1 – Gold Trac limited slip (Tom's Differentials)
- 3.7:1 – Gold Trac limited slip (Tom's Differentials)
- 3.89:1 – TrueTrac limited slip (Currie Enterprises)
- 4.11:1 – TrueTrac limited slip (Currie Enterprises)

Suspension

- Front: 5" Eibach coil springs with custom ShockShop Ohlin's single-adjustable canister shocks, Ground Control Suspension camber plates, custom designed heim-jointed ILE sway bar
- Rear: 5" progressive coil springs with custom ShockShop Ohlin's double-adjustable canister shocks, custom designed rear sway bar brackets and heim-jointed end links
- Front and rear weight jackers by Ross Murray
- Watts-link fabricated and installed by Ross Murray
- Baer Tracker adjustable tie rod ends with bump steer correction

Brakes

- Front: Brakeman 4-piston calipers, custom-designed aerospace grade anodized aluminum rotor hats, Performance Friction NASCAR Intermediate Track directional full-floating rotors, 4" brake ducting split into 3" rotor eye duct + 2" caliper duct
- Rear: PBR floating piston calipers, Coleman IMCA vented rotors
- Tilton in-line brake bias adjuster
- (3) dash-mounted brake pressure gauges (front, rear before bias adjuster, rear after bias adjuster)
- Castrol SRF brake fluid (filled, flushed, and bled frequently)
- OPTIONAL: Tilton billet dash-mounted brake bias adjuster knob with custom built dashboard 'gearbox' that moves a linear bias pointer Front $\leftarrow \rightarrow$ Rear as bias knob is rotated
- OPTIONAL: custom front L/R carbon fiber enclosed brake rotor eye cooling enclosures for 3" ducts

Steering

- Woodward Precision Power Steering collapsible steering column and Quick Release, with custom designed firewall bearing assembly
- Custom billet aluminum steering wheel adapter (converts Quick Release to most steering wheels)
- Momo lightweight steering wheel
- Steering box and pump rebuilt and blueprinted by Lee Manufacturing

Fuel

- Custom aluminum fuel cell container fabricated by Ross Murray
- Fuel Safe custom bladder, foam, pickup, and hardware
- Fuel Safe fuel gauge and sender with custom Fuel Safe-designed electronics filter
- Mechanical fuel pump (impossible to have a electric fuel pump failure)
- SCCA fuel sampling port

Interior

- Accusump 3-quart accumulator (new) with braided stainless line (new)
- Sparco EVO-2 fiberglass racing seat
- Simpson Platinum Series Camlock 5-point harness with 3" lap belt and 2"/3" shoulder belts for HANS Device compatibility, with upgraded lightweight billet aluminum adjusters
- Custom designed carbon fiber/fiberglass dash with removable top for access, including:
- AccuTech NASCAR-style illuminated programmable gauges for oil pressure, oil temp, water temp
- Stewart-Warner mechanical fuel pressure gauge, 7 illuminated dash-fused switches, 4 large bright secondary warning lights (for alternator, low oil pressure, high water temp, high oil temp), Autopower 9,000 rpm programmable tach with external shift light and memory recall, Fuel Safe fuel level gauge, Auto Meter volt meter
- (7) 10-pound weight plates (70 lb total), mounted in passenger seat area, if needed
- (1) 65-pound lead block for additional rear cargo area ballast, if needed
- OPTIONAL: Tilton brake bias adjuster with gearbox and linear pointer (see Brakes)
- OPTIONAL: Cool Shirt controller
- OPTIONAL: Dash-mounted Blind Apex DisplayIT HUD-9X lap timer/counter/data display

Body

- GM rare factory aluminum front bumper (replaces OEM GM steel bumper)
- DuPont Imron Chrome Yellow 6561 commercial finish
- 3 hoods total (including 1 on car), all fitted/painted to match car, 100% interchangeable as follows:
1) OEM Z28 factory fiberglass, 2) Harwood fiberglass flat profile, 3) Harwood fiberglass 3" cowl with removable cowl blockoff plate (blockoff required if raced in SCCA AS class)
[Note: hood hinge lift struts are low-resistance for fiberglass hoods; all hoods are set up for hinges, however, with custom rear lift-off pins/brackets (included) both Harwood hoods can be used as either lift-off or hinged.]

Communications

- Roof-mounted radio antenna
- In-car wiring harness
- Steering wheel mounted push-to-talk button
- OPTIONAL: Motorola headsets and Motorola multi-channel UHF radios

Data Acquisition System (OPTIONAL)

- Race Technology DL-1 data acquisition system, GPS antenna on roof, remote start button on dash
- Separate DASH3lite display unit
- Sensors: RPM, O2 (after last collector in exhaust), Oil Pressure, Oil Temp, Water Temp (intake manifold, radiator 1st pass in, radiator 1st pass out/2nd pass in, radiator 2nd pass out), Radiator Water Pressure (1st pass in, 2nd pass out)
- Calculated from sensor input: Temperature Drop across top of radiator (1st pass), Temperature Drop across bottom of radiator (2nd pass), Total Temperature Drop in radiator (both passes combined), Pressure Drop across radiator (both passes combined)

Video System (OPTIONAL)

- (2) Chase Cam cameras [1 mounted forward, 1 backward] with Chase Cam Split Screen/Picture-In-Picture Video Processor; dash-mounted illuminated remote LANC start button

Miscellaneous

- Engine “A” = OEM bore/stroke 305 cu in, complete cast iron heads (can reduce min weight from 3300 lb to 3150 lb), Canton oil pan, ported spec Edelbrock Performer RPM intake manifold, was running when removed from car; extremely reliable but needs to be refreshed
 - Engine “B” = block, heads and crankshaft only, consisting of OEM bore/stroke 305 cu in block already machined, cast iron heads, cast iron crank
 - Wheels: (8) American Racing aluminum 16”x8” dual 5-stud bolt pattern (4.75” and 4.5” bolt circle)
 - Tires: (4) Kumho Ecsta V710 tires, 265/45-16
 - OPTIONAL: AMB-MyLaps direct-powered transponder (required by SCCA)
Note: this is Optional because transponders have unique transponder numbers and all my racing history is tied to this transponder.....if I give up the unit then I lose all access to my prior racing data.
 - OPTIONAL: Cool Shirt system, including cooler with pump, lines to driver, dash-mounted controller, and extra fittings for draining system
 - OPTIONAL: Intercomp billet scale system, with drive-up ramps (like new)
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Spares

- World Class T5 transmission (used)
- (19) Kumho Ecsta V710 tires, approx. 3 heat cycles each tire, 265/45-16
- (4) Kumho Wet racing tires, 2 heat cycles, 255/50-16
- Edelbrock water pump (new)
- RAM clutch disk (new)
- McLeod clutch disc and pressure plate assembly (used)
- Castrol SRF brake fluid (new)
- 1 set PFC NASCAR Intermediate Track directional full-floating rotors (used)
- Many sets front & rear brake pads (up to 90% new)
- GM rare factory aluminum front bumper (one already on car, this is a spare)
- Rocker panels, painted to match car (new)
- Moroso 3-quart oil accumulator (used, similar to Accusump brand)
- Fuel Safe fuel level sending unit, cut to length for fuel cell in car (used)
- Long-tube headers, ceramic coated, SPD merge collectors, with header wrap (used)
- OEM brake master cylinder assembly sized for brakes currently on car (used)
- Ignition: MSD-6AL ignition control module, caps, rotors, Cap-A-Dapt parts, coil, wires (new/used)
- Blower motor to defrost windshield (like new)
- Rear glass hatch strut (used)
- (2) sets spare aluminum valve covers (1 set with all breather tank welded fittings, 1 set for shipping)
- Holley carburetor parts (new and used)
- OPTIONAL: (4) Hoosier A6 tires, 1 heat cycle (race), 275/45-16 (2014 date codes)
- OPTIONAL: (4) Hoosier A6 tires, 2 heat cycles (qualifying), 275/45-16 (2014 date codes)

Trailer (OPTIONAL)

- Custom built to my specs, silver paint/black undercoat H&H Trailers 16' open steel trailer with open center section (so that you can work on car while it sits on the trailer), perimeter stake bed pockets, 2-5/16" ball, LED lighting, (5) chrome spoke wheels with 3 new 225/75R-15 Goodyear Marathon radial trailer tires and near-new spare tire, removable fenders (so you can open race car doors when parked on trailer), removable front bumper railing, D-rings welded into trailer, 5' steel ramps stored under trailer with additional 5' wood ramp extensions, aluminum tongue toolbox, (4) ratcheting tie-downs, 5,000 lb tongue jack, locking cable for spare tire, locking cable for trailer, tongue lock, trailer ball lock, all locks keyed alike and only use one key, (5) wheel locks. Optional winch.

Note: Buyer of car has first option to buy trailer. Trailer can be sold separately but only if it is still available after car is sold.