

# 2006 SmashCar Challenge CAR BUILDING RULES & REGULATIONS

All cars will be carefully inspected prior to the event. Anyone found cheating or in violation of the rules will be disqualified, will not receive any prize money and will be prohibited from participating in any future DENT events.

## **Event Rules**

Any driver or crewmember not complying with any one of the following rules will be immediately disqualified. Crewmembers are the responsibility of the driver and there will be no refunds for pit passes and registrations.

- All drivers MUST attend the driver meeting prior to the event.
- Any burnouts or reckless driving on the facility premises will result in immediate driver disqualification.
- ♦ No intentional driver's door hits. No getting out of car unless otherwise instructed by a track official or flagman.
- Rollovers may result in driver disqualification at the discretion of DENT officials.
- No two-way radios.
- DENT officials and flagmen MUST be obeyed. Their judgement is FINAL. No arguing, fighting or disobeying the ruling of officials.
- Any vehicle on fire or excessively smoking or leaking fuel will be flagged and disqualified.
- Any door that becomes opened during the event will result in immediate disqualification.
- ♦ All work MUST be completed before arriving at the facility! Vehicle work MUST be complete!
- ♦ Any injuries MUST be reported to DENT officials immediately.
- DENT Chief Official has final decision over any interpretation of the rules and regulations.

## **Driver & Pit Crew Entry**

- Drivers MUST be 16 years of age or older. Pit crewmembers MUST be 14 years of age or older. Pregnant women MAY NOT compete. All drivers MUST have a valid driver's license, must fill out an entry form and MUST read and sign the insurance and media waivers.
- ◆ Drivers and pit crewmembers **MUST** follow all stated rules. **ANY** misconduct or breaking of rules by the driver or a member of his pit crew will result in disqualification. **ANY** driver or pit crewmember fighting, arguing or demonstrating unsportsmanlike behavior will also be disqualified. <u>No drugs or alcohol in the pit area</u>. **ANY** driver or pit crewmember believed to be under the influence of drugs or alcohol before or during the event will be disqualified and prohibited from participating in ANY future DENT Events. Driver and pit crew fees will NOT be returned in the event of disqualification.
- Drivers **MUST** wear DOT or Snell approved helmets with shields or other approved eye protection. Drivers **MUST** wear clean, **long-sleeved shirts**, long pants or coveralls. Fire suits and fire resistant gloves are highly recommended.
- Vehicle registration fee is for vehicle entry only. Pit passes MUST be purchased by driver and crew. No one under 14 years of age allowed in pit area proof of age is required. No crewmembers will be allowed on track, crewmembers MUST stay in designated areas. Pit crew MUST also read and sign the insurance and media waivers.

## **Car Rules**

## Cars MUST remain stock unless noted otherwise in the rules. If it is not in the rules, it does not mean you can do it.

## General:

- Cars allowed Any American made 1980 and newer 2 or 4 door sedan <u>coil spring only.</u> <u>Sedan only NO station wagons.</u> <u>NO leaf to coil spring conversion vehicles allowed.</u> <u>NO PRE-RACE OR DERBY CARS.</u> No 4WD, Jeeps, Utility, Carryalls, Limousines, Commercial, Hearses, Ambulances, Camaros, Firebirds, and Checker Cabs allowed.
- Vehicles MUST have secured, DOT approved seat belts. A 2.5 lb. dry chemical fire extinguisher mounted securely inside the car within the driver's reach is highly recommended.

## Stripping:

• All glass, plastic, fiberglass and chrome moldings MUST be removed prior to arrival at facility. No broken windows in door. NO flammable materials such as carpets, upholstery or headliners can be left in the car. Cars MUST be clean and free of loose objects inside and in the trunk area. Both rear seats and insulation blanket under the hood MUST be removed. Dashboards may be removed.

# Body:

♦ NO WELDING OF INTERIOR BODY SEAMS! Wheel wells may be cut up to 3" maximum to allow for tire clearance. Spot-welding only to folded wheel well lip in 1" intervals - No bolts. NO PRE-DENTING OR TUCKING BODY ANYWHERE UNLESS SPECIFIED IN RULES! Sunroofs must be filled with a securely fastened metal sheet. Rear lower bottom quarter panels may be folded up and bolted to trunk floor pan with 6 bolts per side (sheet metal to sheet metal) (1"max thick bolts and 3"max washers, no welding these washers). Front lower fender may be cut to allow tire clearance - no folding up and bolting or welding.

Rubber body mounts may be removed, but <u>MUST be replaced with a steel spacer or stacked washers to create a MINIMUM 1" gap distance between frame and body (will be strictly enforced).</u> Spacer may be NO larger than 3" in diameter and may NOT be welded to frame or underbody. NO BOLTING BODY DOWN SOLID TO FRAME EXCEPT FOR LOWER RADIATOR SUPPORT. Body bolts may be replaced with up to 1" thick maximum bolts and may be lengthened to travel through TOP and BOTOM HALF of frame and inside vehicle and must be vertically mounted (up and down), with nuts and 3" washers. ONLY the interior 3" washers (not nuts also) may be welded to inside of the vehicle. Equal size flat stock drilled out, as washer is acceptable. BODY BOLTS MAY BE RELOCATED BUT NO ADDITIONAL BODY BOLTS MAY BE ADDED ANYWHERE EXCEPT WHERE SPECIFIED IN THE RULES. Rust spots may be fixed. You MUST use SAME thickness sheet metal, welded ONLY, and over-lapping allowed up to 2 inches. THE 3" WASHER RULE WILL BE STRICTLY ENFORCED AND ONLY A SINGLE BEAD OF WELD AROUND THE WASHERS.

GET A GOOD RULER OR BRING A TORCH! Plastic inner fenders may be replaced with 1980 and newer automotive steel inner fenders, bolt pattern must match and factory stock length and width bolts must be used.

#### Hood:

Springs must be removed BEFORE inspection. Hood MUST have 10" - 12" hole on either side of air cleaner if exhaust is not run through hood. Hood may be secured in 10 spots by BOLTS ONLY not counting factory hood hinges. Bolts or threaded rod may not exceed 1" in diameter and no longer than 10". Washers may not exceed 3" in diameter and ½" thick (washers may be welded to top and bottom side of hood and upper and lower sides of upper radiator support only). 4(four) 6"x 6" x ½" thick tabs may be welded to inside fender edge for bolts and may not connect to radiator support. 4 out of the 10 bolts may travel through top and bottom half of frame with 3" washers welded only on the outside top half and outside bottom half. These bolts may also travel through upper and lower radiator support into frame. Secure your hood only AFTER your car passes tech inspection. Aluminum hoods may be replaced with any automotive 1980 and newer steel hoods. Steel hood conversions that need to be trimmed to fit may be re-welded but must be done in 1" interval spot-welds only. Challenge 3 qualifying cars will be allowed to replace bolts with wire (not both/ up to 6 spots) at 30-minute work period under DENT Official supervision.

#### Trunk

Trunk MUST be empty and free of dirt and debris. Springs MUST be removed and trunk MUST be welded shut ONLY! Welding is ONLY permitted on OUTSIDE of trunk. Welding is to be done with 3/8" steel rod "ONLY" or less to fill in seams. Bottom lower trunk lid may be bent in to allow welding to outside of rear body panel. NO STRAPPING AND NO EXCEPTIONS! You may add 6(six) additional pieces of up to 1" threaded rod in trunk. All 6 pieces of threaded rod may be used as additional body bolts traveling through the top half and bottom half of the frame and extending through the trunk lid and must be vertically mounted. (Washers on the frame and deck lid for these 6 additional bolts still apply as in the chassis and hood section of the rules). 1-(ONE) 15" SQUARE inspection hole is MANDATORY on trunk lid and hole is to be in the CENTER of trunk lid. Inspection hole edges may be rolled and spot-welded in 1" (one) inch intervals - NO BOLTS. NO sucking trunk lid down with the threaded rod, it must be in stock height position. NO welding trunk lid to bumper, NO sliding trunk lids forward, NO mounting trunk lid under rain channels, NO tucking trunk lid.

#### Doors:

♦ All doors MUST be welded or chained closed. The driver's door MUST be welded completely closed and have A NYLON OR STEEL WINDOW NET. Welded doors may be closed ONLY with a steel rod 3/8" thick or less or 3" metal band 1/8" thick and may be welded solid. NO welding on inside of doors. Driver's door may be reinforced on the outside with a steel plate of 3/8" thick or less. Steel plate may NOT exceed the door seam by more than 6". It is recommended that you pad the inside of the driver's door. Tops of doors may NOT be folded over and welded. A post may be welded to the floor on four door vehicles without a post.

## Windows:

• Two vertical steel bars MUST be run from the roof of the car to the body (not hood) in front of the driver. Vertical steel bars running from the roof to the driver's door in the driver's door window or window nets are REQUIRED. These may be welded or bolted.

## **Bumpers:**

♦ Bumpers may be **any** year and **any make** automotive type. Mounting shocks may be altered but **MUST** be **the same as a 1980 and newer model.**All mounting brackets attached to back of bumper, or frame, or shocks may be welded to secure firmly, but **NO** adding any steel. Bumpers may be welded directly to the frame rail end caps with a **6″x6″x3/8″** mounting plate. **NO** welding bumpers to the body. Shocks may be drained before welding. Bumper seams may be welded with a single bead of weld. Thru-bolting is acceptable (drilling a hole and running a bolt up and down through shock, to prevent shock pulling out) or a single ¼″ thick link strand of chain may be used as retaining chain - **No** wrapping around bumper. Bumpers may be trimmed. Folding ends are permitted; **NO** bolting or welding folded ends. **Maximum bumper height is 22**″ **from ground to bottom of bumper**. Bumpers may be turned upside down.

## Interior:

With the exception of floor shifters, ALL large holes in floor pans must be patched with metal. Holes may be cut in the firewall to allow distributor cap or other components to move beyond the firewall. Any holes cut in the firewall for this purpose MUST be covered with a non-flammable or rubber material. Floor may be reinforced under driver's seat. Driver's seat and DOT approved seatbelts MUST be securely mounted.

## Chassis/Frame:

Frame MUST be from a 1980 and newer with same make and model vehicle with same frame to body bolt pattern. Example – Impala to Impala, Crown Victoria to Crown Victoria and etc. Vehicle MUST have factory stock, upper and lower radiator supports – NO seam welding on radiator supports. FRAME MAY NOT BE STRENGHTENED IN ANY WAY (NO FRAME SEAM WELDING) (NO WELDING BODY TO THE FRAME). Welding on or to the frame is indicated in specific cases through out the rules. Front frame rails may be tilted or dropped at the cowl but a single bead of weld will only be acceptable. No other pre-bending or altering of frame will be allowed.

- ♦ A 3" square or round ¼" thick body bolt mount washer may be welded to the OUTSIDE top half and OUTSIDE bottom half of frame, all internal frame body bolt washers MAY NOT be welded. The 1" minimum spacer between frame and body must remain separate and free moving. You may notch the frame.
- NO welding of frame to body. Rust spots may be fixed by cutting out existing rust and replacing section with same thickness steel, and have factory size jig and body mount holes. NO over-lapping, MUST be stitched welded as factory. No swapping frame rails from side to side or front to rear.
- ♦ Roll cage attached to the FRAME is **MANDATORY**. The cage will consist of 8 kicker bars to the frame, 4 door bars (2 on each side of the car), 1 dash bar and 1 behind the front seat bar. The behind front seat bar may not exceed **NO MORE** than 12" behind the driver's seat. 4 kicker bars attached to the frame must travel straight down and connect the dash bar and the behind the front seat bar and the 2 door bars on each side. The remaining 4 kickers bars will be 2 the front and 2 to the back of the car. The 2 front kicker bars and mounting plates may not extend any further forward than the rear side of the front upper A-arms. The two back bars and mounting plates may not extend any further back than the center of the frame rail hump. Kicker legs may be mounted on 6" x 6" x 3/8" thick maximum plates. Mandatory rollover bar may attach and cross over or under roof.

  Any size bars up to 6" diameter are acceptable. Mounting plates on doors MAY NOT exceed 6" by 6" x 3/8" thick.
- ♦ Knuckles and/or joints in steering assembly are permitted. Trailer hitches and mounting brackets MUST be removed.

## Rear Suspension:

- NO coil to leaf spring conversions will be allowed.
- Factory stock springs may be replaced with any automotive type coil springs.

  Locked/frozen shocks or threaded rod may be used to replace shocks for draw down purposes. Threaded rod may not exceed 1" in diameter and MUST mount through original upper shock mount hole or center of coil spring hole. Bottom bracket may be altered but must attach to differential. Threaded rod may travel up through floor pan and have nuts and 3" washers welded on both sides of floor pan.

  Bumper height maximum 22" from ground to bottom of bumper and is strictly enforced.
- Rear upper and lower control rules arms may be altered to strengthen in any manner providing the mounting position remains in the stock
  position and washers may be welded secure control arm mounting positions but must NOT strengthen frame-mounting brackets. Rear end
  housing mounting brackets may be relocated.
- Coils may be welded, bolted, cabled or chained into place providing this does NOT strengthen frame. Shims and spacers are permitted.

## Front Suspension:

4 A-arms may be welded **ONLY** to strengthen (no adding any metal). A-arms may be welded to frame to lock suspension. **2** pieces of steel rod (maximum ½" thick) per A-arm may be welded from lower A-arm and then to frame to lock suspension. Steel rod must be vertically mounted (up and down). Steel rod may not exceed **12**" long. Tie rods and ball joints may be reinforced but must not strengthen frame in any way. **22**" Maximum bumper height.

#### **Engine:**

- You may swap motors. Firewall may be beat back or cut out for distributor clearance. Distributor protectors allowed but must be engine mounted and not excessive. Motor may be chained to frame and motor mounts may be altered and strengthened provided this does NOT strengthen the frame or other non-related mounting components.
- Carburetor **must** have an air filter. No ether. Hand throttles are acceptable. Secondary engine oil coolers are permitted but must be routed into back seat area, securely mounted, and all lines must be high pressure or steel braided and run through another hose type of hose as a splash or leak protector.
- Headers are permitted. Skid plates under oil pan and transmission housing are permitted but may NOT strengthen undercarriage or frame. Skid plates may
   NOT travel from front cross-member to transmission cross-member. Excessive engine leaks or smoking will lead to disqualification.

## Radiator:

Radiator **MUST** be located in stock position. Lower radiator support may be secured by replacing factory bolts to frame with maximum 1" diameter bolts and no spacer is required. You may bolt through top and bottom of frame and **not** extend up through hood. You may **NOT** reinforce or add any metal to core support. Nylon straps, steel bands, or # 9 wire may **only** be used to <u>support</u> radiator and not strengthen radiator support. Wiring will be allowed from the upper radiator support to the front bumper and not through the hood. You may wire in 6 (six) spots with 3 strands per spot with #9 wire. 3" x 1/4" thick washers may be welded to upper radiator support and bumper where wiring. All wiring must be done prior to inspection. **NO A/C CONDENSORS ALLOWED! Water only! Flush out coolant.** 

## Electrical:

- 2 (two) twelve volt or heavy equipment batteries are permitted. Battery ('s) MUST be located inside of the car, and MUST be securely mounted with a 4-point hold down on each and both MUST covered. Batteries and boxes MUST be secured.
- Push button or toggle ignition and power (hot wiring) switch is acceptable. It **MUST** be clearly marked for safety personnel and at least **10**" above the floor.
- Solenoid, voltage regulators, coils and other electrical components may be relocated. Components may be enclosed, but not in such a way so as to strengthen the car. All fuses must be removed except for the gauges charging the ignition system, electric fuel pump and electric radiator fan.

## Transmission:

- ♦ Transmission coolers are acceptable. Cooler may be mounted inside of car. ALL LINES TRAVELING INSIDE OF DRIVERS COMPARTMENT, MUST USE METAL LINES OR HIGH PRESSURE LINES, AND RUN THROUGH SOME FORM, OF ANOTHER HOSE AS A BACK UP SPLASH PRECAUTION.
- Transmission filler tube MUST have hose from top of filler tube and must be routed away from exhaust system toward the ground.
- Shifting linkage may be altered with no safety risk of any kind to the driver.
- Transmission mounts may be altered providing this does NOT strengthen frame. Excessive transmission leaks will result in disqualification.

## Fan:

No restrictions.

#### Gas Tank:

- Original gas tank MUST be removed. Tanks MUST HAVE ROLLOVER STOP CHECK VALVE and tank MUST be mounted in the center of the car behind the front seat. Tanks may be no larger than 6 gallons or a standard 8-gallon bladder type race fuel cell and may contain no more than 6 gallons of gas. Marine style gas tanks are acceptable. No plastic or up-right jerry cans. Tanks MUST be securely mounted and all connections must be secure and leak-proof. Gas tanks/cans must be completely covered. Tanks must be mounted separate from cover.
- Holes must be drilled under and around the tank cover in case gas spillage occurs. Gas spillage WILL result in disqualification! Only gasoline or racing fuel is permitted. No AL or methanol.

#### **Fuel Line:**

- Electric fuel pumps are acceptable but MUST have shut off switch within drivers reach and clearly marked for fire officials. NO plastic lines.
- Fuel line may travel through vehicle, and MUST be protected by steel tube, pipe, or a hose in a hose. Fuel line must be located away from the exhaust system.

#### Rear Differentials:

♦ 8 lugs maximum, any differential may be used. Locked or welded is permitted. Gears are permitted. Any drive shaft is permitted.

#### **Exhaust System:**

• Exhaust system may exit straight up through the hood. If exhaust system runs under the car, it must exit toward the sides or past the driver's compartment.

#### Brakes:

Brakes MUST be safe and functional.

#### Tires and Rims:

- Any ply. Maximum 16.5" height, 10" width. Double tires (tire-inside-tire), rubber inner-liners or solid rubber tires are acceptable. NO studded tires.
- NO valve-stem guards, wheel weights, double rims or split rims. Glue may be used to secure tire to the rim no screws, rivets or bead locks.

# Please read all the rules before calling with questions.

For questions concerning the rules.

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