Racer's Packet

Salem City Gravity Gran Prix

Welcome to Soap Box Derby Racing. We think you'll find that this is a fun, cheap, and safe way to build and race your own car.

This is your packet of materials for the Gravity Gran Prix. In addition to this cover sheet and checklist, it contains the following materials**:**

Registration form
Rules
Inspection Form (which you will take to the preliminary inspection as well as to the race)
Race procedures card with map, which you should take to the race for reference

Driver's Checklist 2013

☐ **Registration and Entry Fee** Due Thurs., Aug 22 5:30 pm Frank Leany, 423-8588
Registration form in packet, $15/car + $10 per driver

☐ **Preliminary Inspection** Tuesday, August 20 7:00 pm Knoll Park Parking Lot
Rules and inspection form in packet, bring inspection form to the preliminary inspection

☐ **Pick up Leaderboard Card** At Preliminary Inspection
Decorate this card with your name and car number, it is used to identify you during the race

☐ **Inspection & Weigh In, get badge** Saturday, Aug. 24 11:00 am Derby Hill, 300 S
Take procedures card (included in this packet) to track, Follow instructions on it

☐ **Driver's Meeting** 11:45 am
At the ramp, must attend to be able to race

☐ **Race—**Line up cars at top of track, follow instructions of pit steward

☐ **Awards** (Pick up Leaderboard Card) After the race

Registration Form

Preferred
Car
Number*

Salem City
Gravity Gran Prix

Owner Name _____ **Date**_____

Phone _____ **e-mail** _____

**Numbers will be granted on a first-come first-served basis*

Drivers
Please list below the name of each participant under the class he/she will be racing in. Fill out one form for each car. Each car can have up to three drivers. **Entry fee: $15 per car + $10 per driver.**

PARTICIPANTS MUST BE REGISTERED BY THURSDAY, AUGUST 22, 2013.

By signing the form below you agree to the terms and conditions in this waiver:

Waiver and Release of Liability

The undersigned does hereby release, waive, and forever discharge Salem City, its assigns, employees, agents or representatives from and against any and all liability for any harm, injury, damage, causes of action or costs and expenses of any nature for which Participant may have or which may hereafter accrue to the Participant, arising out of or related to any loss, damage, or injury, that may be sustained by Participant in conjunction with Participant's involvement in this activity.

Racing involves in inherent risks that may include death or injury. Participant has signed this Release in full recognition and appreciation of the dangers, hazards and risks involved with the Activity.

Participant certifies that she/he is physically fit and in good health and has not been advised otherwise by any qualified medical personnel. Participant is not aware of any health-related reasons or problems, which would preclude or restrict Participant's ability to take part in the Activity.

Class	Driver Name	Age**	Signature of Responsible Party	Fee
Colt				10.00
Mustang				10.00
Stallion				10.00

***If under 18*

Car 15.00

Total _____

Turn in completed forms with the entry fee to the Salem City Offices.

For Office Use Only
Date_____ **Amount Received** _____ **Signature**_____

Salem City

Official Rules

2013

Gravity Gran Prix

Eligibility and Registration

The 2013 Salem City Gravity Gran Prix will be held Saturday, August 24, 2013, at 12:00 noon. The race is run just west of Knoll Park on 300 South. Inspection and weigh-in begin at 11:00. Flag ceremony will take place at 11:50 and the first racers will leave the ramp at 12:00 sharp.

PARTICIPANTS MUST BE REGISTERED BY THURSDAY, AUGUST 22, 2013. Register with Frank Leany. Registration fee is $15 per car and $10 for each driver. Every car must have a unique number given upon registering. You may use any number you choose as long as it isn't being used by a car that is already registered.

Competitors are divided into three weight classes. Age of the participant is at the discretion of the parent, but suggested guidelines are:

Colt class: 9-13 years; Mustang class: 13-17 years; Stallion class: 18 years and older.

A single car may compete in multiple classes (in the case of multiple children in one family, for example) provided it meets the weight requirements for each class in which it is competing. (All ballast must be bolted or otherwise securely fastened.)

The race is open to everyone, regardless of age or gender. Non-residents of Salem City are welcome to participate. Sponsors are allowed and company names, logos, etc. may be displayed on the cars.

General Information

Racers are to be completely gravity powered. No starting or propulsion devices of any kind are allowed. Driver must be in a seated position. No head-first configurations are allowed. Reclining to any degree is an acceptable configuration as long as driver visibility is not impaired.

Some hints and guidelines for building soap box derby cars are available on the internet. Tips and links are available at Leany.com. Be aware, however, that this event is in no way affiliated with The All-American Soap Box Derby and rules and specifications for those events do not necessarily apply.

We will be holding clinics to help you build your car. Register early so we will know that you are racing and can contact you with updates, times, and locations.

A preliminary inspection will be held July 25th at 7:00 pm at the Knoll Park parking lot. Plan to attend this inspection to avoid any surprises or disqualifications on race day. If you cannot attend, contact Frank Leany to make arrangements to have your car inspected well before race day.

Any questions, comments, or requests for clarification should be directed to Frank Leany at 423-8588 or by e-mail at fleany@gmail.com.

Vehicle Specifications

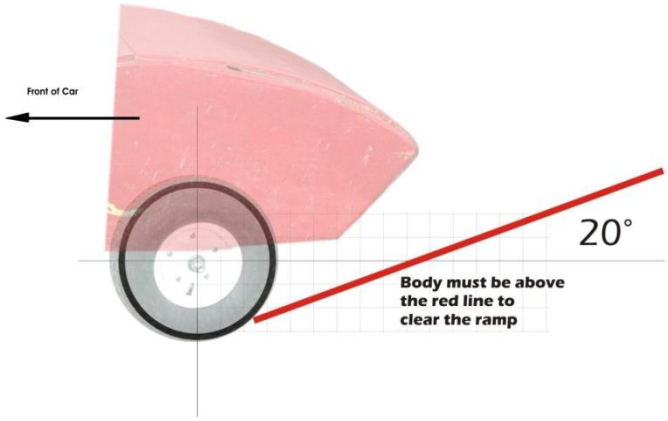
	Minimum	Maximum
Track width (outside of tires)*	24 inches	36 inches
Vehicle height	3" ground clearance	60 inches
Seating surface height	(3" ground clearance)	16" above road surface
Total vehicle length	72 inches	96 inches
Wheelbase	45 inches	72 inches
Vehicle Weight		
Colt (8-12 yrs)**	- none -	275 lbs. with driver
Mustang (13-17 yrs)	- none -	340 lbs. with driver
Stallion (18+ yrs)	- none -	400 lbs. with driver

**Width of body cannot project beyond maximum width*
***Colt class racers will be started lower on the ramp to reduce their speed*

All weight must be bolted or otherwise securely attached. No loose ballast is permitted.

Cars may be made of any material. Any metal frame elements that extend beyond the wheels must be properly blunted with a cross bar to prevent piercing in the event of a crash. Sheet metal on the body is okay. Axles and components may be steel.

Road clearance must be no less than 3". To clear the ramp the ends of the car must be above a line 20° degrees with horizontal from the wheel centerline. Car must have 4 wheels and all four wheels must be in contact with the track at all times.



Cars will be towed up the ramp after each race, so a tow hook (eye bolt) should be provided for the tow strap. The hook must meet the clearance requirements outlined above.

To share ideas and techniques for build a derby car, we will hold clinics and tech nights. We will build some rolling chasses to help new racers get started. Visit Derby.Leany.com for updated details.

Wheels

This is a spec wheel event. All racers must run the specified wheels. Wheels are Harbor Freight pneumatic tires 13" x 4" with integral bearing wheels. The Harbor Freight part numbers changes from time to time, but it is the wheel pictured below:

Wheels fit on a 5/8" axle. A 5/8" bolt 4-1/2" long is just the right size to go through the hub. Wheels must have some sort of locking arrangement on the nut such as a locknut or an additional nut.

Wheels may be trued, balanced, etc, but no material may be removed from the wheels other than that necessary to balance. Wheels may be lubricated, but no modifications to the bearings are allowed.

Brakes

All vehicles must be equipped with brakes that contact the rear tires. Brakes must be able to completely stop the tire. The driver must be able to steer while braking. Braking tests will be conducted at the inspection to ensure that they are adequate. Cars without adequate brakes will not be allowed to race. Hand brakes are discouraged. Consideration will be made for those with physical limitations.

Steering

Steering must be positively controlled. Driver must be able to steer with one hand. Pivot axle steering must have limiters that prevent the car from turning a radius tighter than 15 feet. Careful consideration should be given to the steering ratio (angle of steering wheel turn to angle of front wheel pivot) to ensure that the steering is not too sensitive.

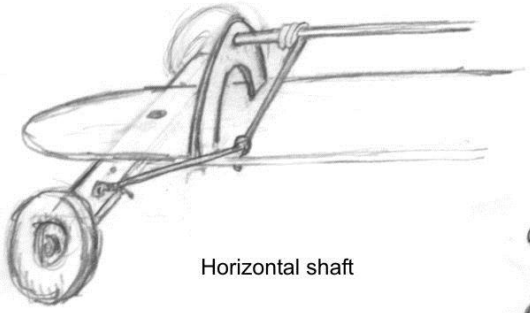
Attachment points for the steering must be positively secured along the axis of force of the cable. Screw in eyebolts will only be permitted into solid wood—not laminate or pressed wood.

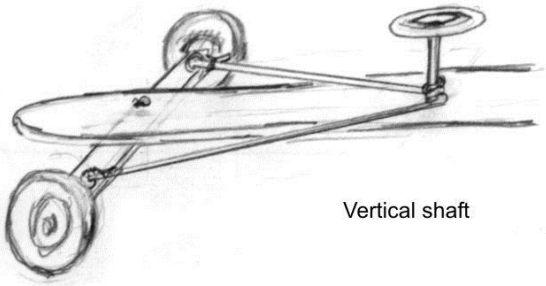
Rope pull steering is allowed ONLY with a foot brake. Driver must demonstrate he can control the car while stopping. Foot steering is not allowed. Cable wind steering (a cable is wrapped around a cylinder that pulls on the axle as the shaft is turned) is recommended as an easy way to positively steer. Tiller steering is discouraged, especially if the car is equipped with a hand brake.

See attached detail for information on steering.

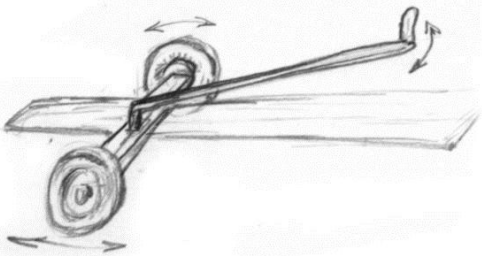
Soap Box Derby Steering Systems

Cable Wind Steering (recommended)

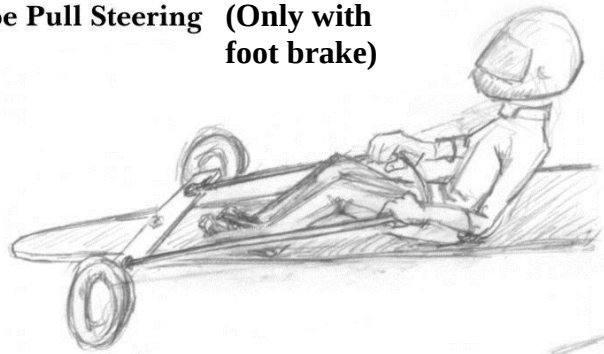




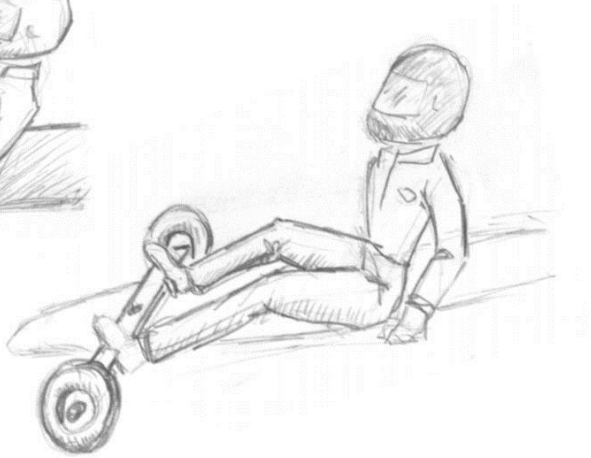
Tiller Steering (discouraged)



Rope Pull Steering (Only with foot brake)



Foot Steering (not allowed)



Safety

All drivers must wear an approved helmet (DOT, Snell, etc.). Bicycle helmets are not allowed. Cars will have full floors and should have some body structure to prevent the driver from accidentally contacting the pavement. The vehicle must not have any sharp projections, loose parts or edges that might pose a safety hazard. All ballast must be securely fastened and cannot move, accidentally or with driver intervention, during the race. Anything inside the cockpit that could injure the driver in the event of a crash should be padded. Seat belts are not required.

Care should be taken to ensure that the center of gravity of the vehicle is as low as possible. Maximum height of the seating surface is 16" above the road surface.

In order to maintain the safety of the event the race committee may impose additional requirements as conditions warrant.

Spirit of Fair Competition

The objective of this event is to provide fun for everyone regardless of resources. To that end the rules strive to provide maximum safety and fair competition with the fewest requirements possible.

As issues arise that are not specifically addressed in the rules the racing committee will pass judgment to maintain the spirit of the rules. If you have a question about whether something is appropriate, *ask*. A phone call now could prevent a disqualification at inspection time. As clarifications are made they will be applied universally to all participants.

Inspections

A preliminary inspection will be held at 7:00 pm Thursday, July 25, 2013, in the parking lot by the pond. Bring your inspection sheet (included in this packet) to the inspection.

The purpose of this inspection is to give the participants time to apply any modifications that may be required. Helmets will also be inspected. No one will be allowed to race with a helmet that is not Snell or DOT approved.

Final inspection will be performed at 5:00 on race day. Winning cars in each heat may be inspected after the heat to ensure that they conform to the rules.

Leaderboard Card

At the preliminary inspection each racer will be given a blank leaderboard card (unless he already has one). This card will be placed on the scoring tower is to track your position during the race, showing your position relative to other racers.

Take this home and decorate it with your car number and name and the paint scheme of your car so that it’s easily identified with you. You can make your own out of poster board 6” tall x 22” wide.

Bring your card to the race where you will give it to the recorder after you have been inspected and weighed. You can pick it up after the race to take home as a souvenir or use next year.

Salem City Gravity Gran Prix

Derby Car Inspection

Car Number

- ☐ 1. Steering, turning radius >15' _____
- ☐ 2. Brakes, hold on the ramp _____
- ☐ 3. Body fully enclosed, seat ht. <16" _____
- ☐ 4. No starting devices _____
- ☐ 5. No sharp edges, protrusions, etc. _____
- ☐ 6. Spec Wheels, positively secured _____
- ☐ 7. Approved helmet _____
- ☐ 8. Other _____

Weight

	Age	Weight
Colt Driver	(9-13)	(275 max)
Mustang Driver	(13-17)	(340 max)
Stallion Driver		(400 max)

Inspected by: _____ Date: _____

Waiver and Release of Liability

The undersigned does hereby release, waive, and forever discharge Salem City, its assigns, employees, agents or representatives from and against any and all liability for any harm, injury, damage, causes of action or costs and expenses of any nature for which Participant may have or which may hereafter accrue to the Participant, arising out of or related to any loss, damage, or injury, that may be sustained by Participant in conjunction with Participant's involvement in this activity.

Racing involves in inherent risks that may include death or injury. Participant has signed this Release in full recognition and appreciation of the dangers, hazards and risks involved with the Activity.

Participant certifies that she/he is physically fit and in good health and has not been advised otherwise by any qualified medical personnel. Participant is not aware of any health-related reasons or problems, which would preclude or restrict Participant's ability to take part in the Activity.

Colt _____ _____
Driver Name Signature of Responsible Party

Mustang _____ _____
Driver Name Signature of Responsible Party

Stallion _____ _____
Driver Name Signature of Responsible Party

Race procedures

Be at the track by 11:00 with your Inspection Form, Leaderboard card, and this reference page. Park in the Knoll Park parking lot and enter the track with your car at the west entrance (see map)

Move through the stations from west to east (see map)

- Weigh-in (inspector will fill in the weight of your loaded car on your inspection sheet)
- Tech inspection (inspector will fill out your inspection sheet)
- Final check-in (get your ID badge)
  At the registration desk the recorder will take your inspection sheet and leaderboard card and issue your ID badge. This badge verifies that you are registered and inspected and have a leaderboard card to track your progress
- Up the track to congregate at the ramp

At the ramp the Race Steward will give you instructions on where to be and what to do.

Please be where you're supposed to be. Once you're at the track life gets very simple. You are focused on taking your car through the inspection, getting your form filled out, then giving it and your leaderboard card to the recorder. Please don't delay the race by being anyplace other than where you are supposed to be.

Drivers’ meeting is at 11:45 am at the ramp. At the drivers' meeting you will get an endorsement on your name tag that says you are cleared to race. If you do not have your ID tag with the endorsement you cannot race.

Flag ceremony will take place at 11:50 and the first racers will leave the ramp at 10:00 sharp.

Cars will be towed up the hill after each race. Park your car behind the ramp. Follow the instructions of the Race Steward who will ensure that you are lined up for your next race.

Drivers must keep hands and arms inside the body at all times. Any actions that appear to be pushing or propelling the car could result in disqualification from the heat. Any car that leaves its lane during the race may be subject to disqualification. Crowding or other unsportsmanlike driving is not allowed.

Races will be run in timed heats of 2 cars each with each racer in the class running the same number of races. Three places will be awarded in each class based on fastest average elapsed times for all the races. In addition, a People’s Choice Award will be given to the car that the spectators vote as their favorite.

After the race, go immediately to the recorder's booth for the awards ceremony. Pick up your leaderboard card. You can keep that card to race next year or as a souvenir. You also keep your ID badge.

The format of the race may change as conditions and participation warrant.