

# Slingshot Rules 2011



Maintenance & Set-Up

[www.speedwayentertainment.com](http://www.speedwayentertainment.com)

For All Weekly and Tour Races

# **RULES FOR 2011**

1. All cars raced must be exclusively supplied by the manufacturer; Speedway Entertainment. Engraved Slingshot plates must not be removed.

2. Absolutely no structural modifications (welding, cutting, additions or brackets). The bodies must remain as supplied by the manufacturer and must fit the templates. All bends, rolls and holes must be within 3/8" of an inch of the certified Slingshot body.

3. You can adjust your car anyway you want but don't cut, grind or weld any components.

A. Coil Spring adjustment

B. Pan Hard height

C. Weight ballast. No liquid or loose weight allowed. No weight allowed inside exterior or interior side rails. Add-on weight cannot be outside of cockpit and must be secure.

D. Rear axle offset. Cars must be 2 wheel drive at all times.

E. Tire Stagger is up to team choices.

F. Coil Spring 60, 80 or 100 lb. Only. Mix and match.

4. 68 tooth gear sprocket maximum. All sprockets must be complete, no teeth missing or added holes drilled.

5. Tires: Maintained Durometer

A. 16-650 and 18-950 minimum durometer reading 60

B. Front asphalt minimum durometer reading 65

C. All cars checked must be within 4% of each other. EX: If all cars durometer at 62 your tire cannot be more than 2.84 lower than that.

Air Pressure: For 2011 there will be NO minimum air pressures or maximum air pressures. This will be put in effect for both All Star and Junior Classes.

A. Air must touch rubber of tire (NO LINERS). If inner tube is used it also must touch tire rubber. Only 1 valve stem allowed in RR wheel.

Tires: Carlisle /DURO branded SYS, dealer purchased

A. 16/650 tire only front tire allowed. No tire additives.

B. Tires allowed on the rear are, 18/950, 18.5/8.5 and 16/6.50.

C. Asphalt tires may be used on any track surface.

Wheels: Aluminum right rear is mandatory and is the only wheel used for right rear. Only 5" & 7" wide steel wheels on other 3 corners. Wheel covers allowed on all 4.

NO welded reinforcement on any wheel will be permitted at all. RR wheel reversal is allowed.

1/4" bolt on Bead Protectors allowed.

Clutch: Only 2 clutches are legal.

1. SE Manufactured 4 Shoe 40 Chain & Noram 1800 Series

Front Axle: Maximum caster is 5 degrees. No cutting or welding of front axles. No inside additions. Must be purchased from an authorized dealer and made by Speedway Ent.

Body: No body older than 2008 will be legal. Side cage visors must not exceed more than 5" below top of the cage and may not break outside cage lines.

Brakes: Hydraulic(Wilwood ) and mechanical systems are allowed. All components must be used as supplied by an official Slingshot dealer. All must remain stock with no modifications and purchased from a certified dealer. Any pad legal

Brake Rotor: Must not be any thinner than 5/16" or have more than 4 -1 1/4" lightening holes

Engine: Briggs & Stratton Vanguard only. WIRE SEALS only.

B. No modifications to engine. No oil additives.

C. The only allowable adjustments are idle, speed jets, valve lash, carb jets, valve springs, valve seals, retainers, spark plug and flywheel timing.

D. All replacement parts for Model 35 must be original Briggs & Stratton manufactured engine parts.(No grinding, polishing, lightening, changing size or location of any part).

E. Only KNRD-0720 Air Filter allowed. No open tops.

Fuel: No additives including fuel lubes, fuel must pass tech test.99% pure alcohol only. Loss of points and wins if failed.

Clutch: Clutch must remain as supplied with no modifications to drum driver or shoes. 10 tooth # 4 Clutch: Clutch must remain as supplied with no modifications to drum, driver or shoes. 10 tooth # 40 chain is mandatory. Chain oilers will be allowed.

Carburetor must remain stock appearing without any external modifications. NO material can be removed or added. Air bleed holes and jet size may be modified. Multiple carb spacers may be used but must match inside stock dimensions. Absolutely no plastic fuel lines or filters.

Carb. Airflow cannot be improved or altered, using only stock butterflies & screws. Carb stack flange base may be altered. No material can be added.

Intake manifold area can be ground & polished 5/8" above and below the carb. manifold spacer.

Slingshot approved mufflers are mandatory. Muffler must be attached to end of exhaust pipe. No modifications. Exhaust fins must be no farther apart than 1/4".All exhaust must go through muffler for entire event or car will be black flagged and DQ'd. This includes header loose on head or broken in any way. NO EXCEPTIONS.

All engine work other than allowable adjustments must be done by Speedway Entertainment and seals must be intact. A \$125.00 fine will imposed for each seal infraction.

Speedway Ent. has the right to impound any engine or car for complete evaluation. Any part found not to be within the rules will not be returned to competition and team will lose all points.

Alternator must be in working order at all times and all 12 magnets on flywheel must be in place.

*Safety:* Speedway Ent. does not enforce any safety issues. Track safety rules will be the default in all instances.

All bumpers, front axles, etc. must be Slingshot™ certified. Components must remain the exact dimensions and thickness of the original. Steel or aluminum heim ends will be allowed. No additional weight can be placed inside rails. All chassis repair must be performed by Speedway Ent.

*Weight:* Minimum car weight after race with driver must be 775. All added weight must be bolted to weight tabs and cannot extend past cockpit. 120 lb. max. LF wheel weight.

*Shocks:* SE stamped Bilstein and AFCO 1551 are allowed for 2011. Coilovers allowed to adjust ride height. Mix & match is legal. 2 Bilsteins must be used. Helper springs or coil rubbers allowed.

*Fuel Cells:* Mandatory for all events. No bolted on plastic tanks will be allowed. No added weight allowed in tank. Cap flange must have retaining ring inside tank. Top finishers may be asked to use track supplied fuel.

Slingshot™ manufacturer reserves the right to reject any car from competition with penalties possibly forthcoming. All protests must be in writing to Speedway Entertainment

Speedway Ent. is not responsible for any race track procedural rules.

Rule infraction penalties: Any fuel, engine seal or internal engine violation will result in loss of all points and parts at that time. Other rule violations could result in loss of illegal part(s), DQ and points for that night.

*Steering Wheel:* Any size steel or aluminum wheel can be used.

*Gauges:* Tach, CHT, fuel pressure and oil pressure are only gauges allowed. No exhaust temp. gauge or oxygen sensors allowed.

*Flywheels:* Lightened, altered or after-market flywheels are illegal. Speedway Ent supplied stock flywheel only and must remain that way. Aluminum flywheels are illegal.

*Juniors:* The recommended age for the Junior class is 8-13. Driver ability is co-existent with age upon class move-up prior to age 13. Minimum weight for Junior class is 685 lbs. Juniors must run a 1 bbl. Carb with .526 bore and no airflow modifications allowed.

*Purse Structure:* Weekly purse structure will be set by speedway. Regional and National touring events will have purse set with contractual agreement signed by participating speedways. Track point fund is solely their responsibility. ALL RULES EFFECTIVE: JANUARY 1, 2010.

# Basic Set-up

1. Great set-ups are done by trial & error. Keep good records.

2. Chassis Height: Rear 2 1/2-3 Front 2/1/2-2

More height=more side bite and less forward bite

Less height=less side bite and more forward bite.

3. Tire Stagger: 1/4 mi. track 4-1 1/2" stagger / 1/8—1/5 mile track 5 1/2—3" stagger

4. Tire Pressure: LF—4 -6 lbs. RF— 6—9lbs.

LR—6—12lbs. RR—16—35lbs.

More air in rear tire loosens car up: use air to work with stagger.

5. Panhard Height: Higher loosens entry and tightens exit. Lower tightens entry and loosens exit.

6. Wheel Weights: Loose set-up: LR 165 / RR 180 lbs. Tight set-up: LR 180 / RR 165 lbs.

7. Right Front Inset: Measure by running string across the outside of the RR tire and stretch it to front tire. Measure distance from string to outside of front tire.

Greater the measurement the looser the car

Smaller the measurement the tighter the car.

Example: 2"—5" this can be adjusted by moving your wheel on the axle or shortening or lengthening the rear panhard bar.

8. Toeout should be set at 3/16" out. Scribe a circle around the tire on each side in the front. Measure between the 2 lines 3/16" out.

9. Front Axle: Make sure front axle is square. Measure from crossbar back to axle.

10. Wheelbase: RS will always be longer than LS by 1/2" to 1 1/2".

11. Front Radius Rods: Must be bind free. Leave 1/16" —1/8" gap at front radius rod bolt.

12. Be sure all suspension parts are lubed and bind free

13. Coil Springs: 1/8—1/5 mi. LF 60 / RF 80 / 1/4—1/3 mi. LF 80 / RF 80 / Soften corner for more bite.

14. Gearing: Maximum of 6100 RPM's.

1/10—1/7 mi. track 5.90—6.40 / 1/5 mi track 5.55—5.75

1/4 mi. track 4.90—5.20 / 1/3 mi. track 4.50—4.80

DO NOT turn engine over 6100 RPM's. A rev limiter is suggested.

## **Maintenance.....**

**SLINGSHOTS™** are real race cars and must be treated as such to be competitive. If you are unsure about anything posted in this manual, contact a certified Slingshot™ dealer for assistance. Illegal performance enhancement will be dealt with accordingly.

A clean car will assist in your maintenance program.

All moving parts such as heims, throttle bell crank, throttle shaft, etc. must be lubed with WD-40 or equivalent. All grease fittings should be greased every race.

Make sure all nuts and bolts are tight after every race,

Especially headers, lug nuts, radius rod bolts, motor plate and clutch bolts.

**Brakes:** Re-adjust and check brakes after every event. Move the arm on the caliper and back it off the 1/4" jam bolt 3-5 turns. Turn large spanner nuts clockwise until brakes have a slight drag on rotor. Tighten jam bolt with bottom as far towards the rear of car as possible, then adjust stop at pedal. Place grease between plunger and back of shoe every 5 races to prevent sticking.

**Carburetor:** Carb is modified for alcohol. Do not use stock carb or parts. Keep carb clean and free of dirt when removing. Take fuel line off on the inlet side of filter. Alcohol will gel if you let it sit more than 2-3 days. Run car every 2-3 days to circulate fuel or it can be drained and gas can be filled into the carb, through the fill line. If carb doesn't work properly at first, it must be completely disassembled and blown out thoroughly with compressed air. Float must be checked for correct height. When carb is held upside down float must be level with the base of up 1-2 degrees. If float is angled down fuel will bypass needle and fuel will come out top vent tube. (Do not plug vent) Rubber bowl gasket will expand when removed, wait about 7 minutes to return to size. Have a spare ready. Main jets are behind 12MM screws. Jet number must be checked with number drill. Stock is between .063 & .065. Spare carb is advised.

**Engine:** 5-30 syn. oil is advised after a 1 race break-in. Do not use heavier oil or additives. Oil level to be 1/2 full to full on the stick and must not be milky. Do not clean the inside of the blower housing with a high pressure hose. Lineup exhaust gaskets with the header. Set coil gap with a business card. If car is running on 1 cylinder remove diode wire between coil. If it runs on both cylinders, replace wire. Coil work on ground only. Do not hook positive wire to coil terminal on side cover.

When starting engine be sure the rear wheels are off the ground. On cold days less than 50 degrees turn both idle screws to 1 out and cover blower inlet to warm engine quicker. Once CHT is up to 180, idle screws are to be returned

Turned to 3 turns out. This will keep the engine oil from getting milky. (DO NOT race with milky oil) DO NOT race with engine under 200 degrees. Engine rebuild should be every 25-40 races. Suggested valve settings are 10 for intake & 12 for exhaust.

**Fuel Pressure:** Fuel pressure should be set at 3 to 4 lbs. idle mixture screw should be set at 2 1/2 to 3 1/2 turns out.

**Chain:** Chain alignment should be done with great precision. Make sure crankshaft is square with the rear axle. Hold a straight edge on the outside of the gear to line up the axle gear with the clutch gear. The chain must be kept with 1/4-1/2 of free play. FYI: Chain life can be extended by soaking chain in engine oil. Oil chain after each time on the track. Do not get oil on the clutch. To remove the chain from the car or replace, remove LS bearing cam bolts and slide through gap. The spare chain can be slid through in a pinch. Chain life is approximately 10-15 races.

**Communications:** One way track radio only allowable communication. No cell phone or 2 way with any crew member or family allowed. Forfeiture of money and points for that event will be administered. Track transponders must be installed where designated by speedway.

*Any part not covered in Rulebook will be clarified at time of car inspection or in supplied photos. Race team responsible for all lab costs if fuel test fails.*

**Tour Info:** Junior National Points will consist of total points earned in designated tour races + weekly track points + car count average.

All Star National Points will use 3 National, 1 Pit Stop Challenge and 1 Super National + highest point total in weekly or regional points with average car counts added in.

If all preliminary qualifying is completed and the track cannot reschedule the remaining events left in the tour event, points will be awarded by starting lineup from Dual Round heat point totals.

## **2010 Champions**

**2010 All-Star Series National Champion: SHANNON SMITH**

Mid-Atlantic Gold: **MATT DEALAMAN** Empire: **CHARLIE LAWRENCE**

Mid-Atlantic Silver: **CODY KLINE** Sunshine: **JASON FORD**

Great Lakes: **JEREMY PAULSON**

## **2010 All-Star Series Track Champions**

**Linda's:** Gary Hieber    **Kutztown:** Michael Glass    **Hamlin:** Dale Kober    **Hamlin Supers:** Paul Ennes

**Borger's:** (Fri.) Kurt Bettler / (Sat.) Stan Friedman    **OVDO:** Tyler Pirone    **Sumter Co.** Jason Ford

**WVMP:** Rich Howard, Jr.    **Dirt Devils:** Jason Ford    **Shellhammers:** Brett Bieber

**Button Buck:** Jeremy Paulson    **Accord:** Jim Babb    **Speed weeks:** Cody Kline

**Hurricane:** Earl Maxham    **Caroga Creek:** John Smith

**2010 Junior National Champion: TYLER DIPPEL**

## **2010 Junior Track Champions**

**Hamlin:** Danny Buccafusca    **OVDO:** Kevin Predmore, Jr.    **Accord:** Jimmy Leiby / Jesse Leiby

**Borger's:** (Fri.) Amber Orashin / (Sat.) Joseph Infante, Jr.    **Button Buck:** Jim Chisholm. / Derek Clement

**WVMP:** Jared Zionkowski    **Caroga Creek:** Jack Bublack

## National Point System

1-120	11-68	21-48	<b>All DNF over 30 cars will receive 20 points</b>
2-110	12-66	22-46	
3-105	13-64	23-44	
4-100	14-62	24-42	<b>For National Points -2 points for every car not entered under 30 cars</b>
5- 95	15-60	25-40	
6- 90	16-58	26-38	
7- 85	17-56	27-36	
8- 80	18-54	28-34	
9- 75	19-52	29-32	
10-70	20-50	30-30	

**Three Nationals, one Super National and one Pit Stop Challenge + highest point total for Weekly Track or Regional points + average car count.**

**Junior National will use same points, but no -2 deduction. Highest weekly track + average car count will also be added to designated race points.**

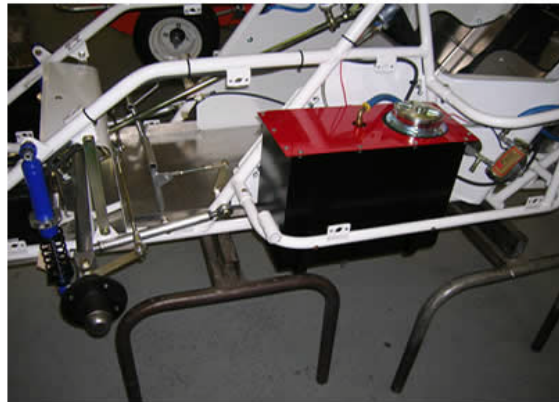
### ***Pit Stop Challenge Rules***

**Car must be jacked up on right side only. Right rear wheel & tire must be removed and resecured. Different tire and wheel must be used. No crew member will be allowed to break the plane of the right side bodyline. Penalty will be restarting at the rear. Cars will pull away after work is completed and checked for loose lug nuts. Cars will restart in the way they pulled out with all penalty cars being held for the rear.**

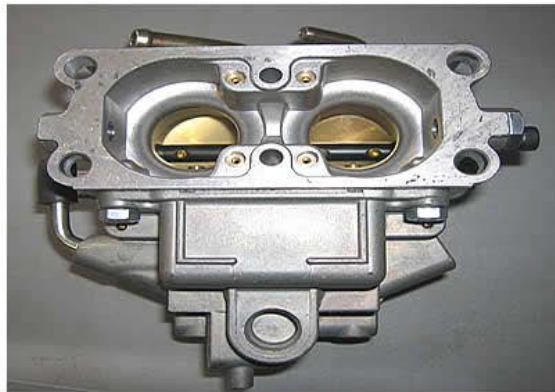
**Any work done on the right side of the car will be permitted. No refueling is allowed.**



**Photo # 1**



**Photo # 2**





*Always  
remember  
racing is a sport  
so... Have Fun!*



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