

# SPEEDWAY 660

## AUTO VALUE 250 - 2011 RULES

Last Updated: Aug 20, 2011

### 1 BODIES

- 1.1 2004-11 ABC Five-Star bodies are to be installed just as specs suggest. That means 47" roof height and 4" body height. Will run 6.5" spoiler on ABC cars. NOTE: for rules regarding their installation please refer to the 2011 A-B-C rule guidelines. Lexan rub rail permitted  
Bodies will be standard fiberglass quarter panels, deck lid filler, hood, roof, and fenders. No Carbon Fiber  
**Manufacturer's identification labels must be visible and not painted over.**  
**Body panels must be mounted as produced. No "pulled in" fenders, doors, quarter panels, etc.**  
**Body air ducts may only allow air into interior NOT exhaust it out.**

**2003 and older bodies – SEE APPENDIX B**

### 2 WEIGHTS/TREAD WIDTH

- 2.1 The GM crate Engine P/N 88958604 (**sealed by 660 or MPST**) must weigh a minimum 2750 lbs (full of fuel).
- 2.2 Steel headed conventional 2bbl motors must weigh minimum weight of 2800 pounds (full of fuel).
- 2.3 **PASS legal "Crate Engine with NO Changes" (PASS engine option #4) GM P/N 88958604 crate engines will be permitted to run in 2011 and must weigh a minimum 2775 lbs (full of fuel).**
- 2.4 **PASS legal cam change engine (PASS engine option #4 – see Appendix C) will be permitted to run in 2011 and must weigh a minimum of 2850 lbs (full of fuel)**
- 2.5 **Note: all non "MPST or 660 sealed" crates will be checked post race in the event the car is a top finisher or has won lap money. This will be a mandatory requirement for any cars designated to go to tech for engine check and disassembly. Any car that has won lap money but drops out before finish will be required to remain in pits for tech inspection until notified by tech officials of the requirement to come to tech or not.**
- 2.6 There is NO penalty for a dry sump engine (steel head motors).
- 2.7 Conventional Motors - Cars will have a 7400 (or less) RPM rev limiter are permitted a maximum 57% left side (at all fuel levels).
- 2.8 **Crate Motors** - Cars will have a 6400 (or less) RPM rev limiter are permitted

**a maximum 57% left side weight.**

- 2.9 Cars must be full of fuel for all heat races and features
- 2.10 Maximum tread width 66", minimum tread width 64".
- 2.11 All ballast must be painted white and the car number must also be painted on it.
- 2.12 No weight – or other material is to be placed lower than the bottom of the frame rails.
- 2.13 See Shock rule for Shock weight break.

### **3 FRAME**

- 3.1 2" x 3" fabricated steel tubing or larger.
- 3.2 **3.5"** minimum ground clearance with driver **out of car.**
- 3.3 Minimum wall thickness of .083".
- 3.4 Minimum wheelbase 101". Measured from center of rear axle to bottom ball joint with ¼ inch tolerance.
- 3.5 **50 lbs per inch short of 101".**

### **4 ENGINE**

#### **Canadian MPST or 660 Sealed Crate Engine**

Engine must be purchased through 660 authorized channels and be delivered to 660 before it will be approved for competition.

Crate Engine Details:

- a. - Must use Holley 650 carb 4150HP # 80541-1
- b. - Carb will bolt directly to the intake using a maximum .065 gasket only. No spacer plate is allowed
- c. - Carb must pass No-Go gauges (new extensive checks)
- d. - These engines are sealed at the intake manifold, cylinder head, front cover, and oil pan with special twist off bolt heads
- e. - The fuel pump pushrod may be replaced with a COMP CAM P/N 4607
- f. - Original timing cover and harmonic balancer must remain as produced
- g. - Headers must be a 1 5/8" to a 1 3/4" stepped header with a 3" collector
- h. - Maximum RPM limit is 6400.
- i. - All "crate engines" must be approved by 660 officials and tagged for identity purposes before they can enter competition.
- j. - "Crate engines" will maintain a minimum crank height of 11".

#### **PASS "Crate Engine with NO Changes" GM GM P/N 88958604 Crate engine**

- must follow all rules for above Canadian sealed engine.

#### **PASS Cam Change crate engine details in Appendix C**

### **Conventional Steel Headed 2bbl Engine**

- 4.1 360 cu.in. Maximum (measured with volume pump or manually).
- 4.2 10.5:1 maximum compression (10.99 absolute checked with a whistler).
- 4.3 Measurement of whistler will be final.
- 4.4 Cast iron heads only.
- 4.5 No porting, polishing, blueprinting, or acid porting allowed.
- 4.6 Multi angle valve jobs accepted.
- 4.7 Flat tappet camshaft only. **Roller cam option will carry 25lb penalty**
- 4.8 No mushroom lifters.
- 4.9 No aluminum rods.
- 4.10 Roller rockers allowed.
- 4.11 Must run air breather.
- 4.12 Any 2 or 4 barrel intake allowed.
- 4.13 Gasket matching allowed 1/2" in only on ports.
- 4.14 The bowl and short turn on the intake side, below the valve seat, may be reworked in as far as the head bolt. Bowl blending below the valve seat on the exhaust side is limited to one- inch. Port matching allowed in maximum 1/2" "
- 4.15 Minimum crankshaft (center) height 10".
- 4.16 G.M. 2" setback. Ford and Mopar allowed additional 2" setback from front most cylinder centered with upper ball joint.
- 4.17 No Australian, New Zealand or other exotic heads allowed.

## **5 IGNITION**

**DISCLAIMER :** Speedway 660 adopted an ignition system inventory policy in 2005. It includes inventory of ignition components and rentals of track components when necessary. These are available to visiting teams in the event that the ignition components they have are not verified as legal competition devices as the weekly cars have done. Provision has been made to assist in connection of track components (i.e. MSD boxes) by way of standardized connectors and any other hardware as deemed necessary. Please see Ignition section at the end of these rules. For further assistance please contact Chris Johnston at (506) 454-RACE or e-mail ([chris.johnston@speedway660.com](mailto:chris.johnston@speedway660.com) )

**NOTE: For the 250 the requirement is that you run a 660 (or MPST) inventoried box UP ON THE DASH, you have all your**

**wires visibly traceable, you have a 6 pin MSD #8170 with the female terminals(metal) installed in the male connector(plastic) on the car harness end (wired as per diagram below) and you have a removable section of tach wire.**

ALL MSD BOXES for NON-CRATE ENGINES WILL HAVE A 7400RPM CHIP SEALED INTO BOX. CRATE ENGINE CARS WILL HAVE A 6400 RPM CHIP SEALED INTO THEIR BOX.

The tach wire leaving terminal B of the (MSD # 8170) connector is to have a removable section of wire (to start no more than 12" from the box) and be a minimum of 8" in length. This 8" section is not to be covered by the convoluted tubing. This 8" of wire will be removed prior to the car taking its first lap of competition and remain that way for the remainder of the event. The HEI distributor tach wire is also to be equipped with the same 8" removable section of straight wire that will be removed prior to competition.

## **6      CARBURETOR**

- 6.1      Holley 4412 500 CFM stock, only choke horn may be removed.
- 6.2      Must pass SPEEDWAY 660 no-go gauges.
- 6.3      **All Crate Engines:**
  - Must use box stock Holley 650 carburetor 4150HP # 80541-1
  - Carburetor will bolt directly to the intake using a maximum .065 gasket only. No spacer plate allowed.
  - **Carburetor must pass all 660 No-Go gauge tests**

## **7      WHEELS**

- 7.1      Maximum ten inch measured bead set to bead set.
- 7.2      Steel wheels only.

## **8      SHOCKS**

- 8.1      One per wheel regardless of manufacturer
- 8.2      Sealed steel/aluminum shocks (non rebuildable) and rebuildable shocks will be permitted. **Shocks with External adjusters will be allowed.** NO EXTERNAL RESERVOIRS OR CANISTERS. There is NO claimer rule on shocks.
- 8.3      **Cars with MPST Legal AFCO shocks will be allowed a 50lb total weight break.**  
**Note: This weight break is only applicable providing there are no external suspension travel limiting devices in use on the car.**

8.4 **Cars not permitted to change their shocks to other shock rule after heats have started.**

8.5 Maximum shock gas pressure will be 175psi.

8.6 Ride height will be checked regularly immediately after checkered flag.

## **9 CLUTCH**

9.1 Any safe clutch and flywheel may be used.

9.2 Scatter shield mandatory with open clutch.

9.3 **Minimum diameter of clutch discs is 5.5". Magnetic steel plates only (i.e. no carbon fiber)**

## **10 REAR END**

10.1 Maximum 5.88:1 gear. Minimum 5.57:1 gear. (steel head motors)

10.2 **Solid spool or locked rear ends only . Non functioning locking type rear ends allowed provided they are "locked" and officials can determine that they are locked.**

10.3 Matching white lines are to be painted on each hub that indicate the relationship of one axle to the other. These lines are to be positioned so that they are lined up exactly the same on each side - ie. both lines would run from the 3 to the 9 o'clock position.

10.4 "Front Change" quick change rearends will not be permitted.

## **11 RADIATOR**

11.1 Any radiator (only one permitted and must be ahead of the engine).

11.2 Must use water. No antifreeze.

## **12 TRANSMISSION**

12.1 Any two, three or four speed manual with operating reverse. Gears not to exceed 4 forward gears. Must have at least 2 forward gears and 1 reverse gear in working order.

12.2 Clutchless (Bert type) transmissions are allowed as well as Jericos.

12.3 Must race 1:1 ratio.

12.4 No gear may be closer than 1.23 to 1. (ie 3rd gear in a four speed can't be any closer to 1.00 than 1.23)

12.5 No variable ratio transmissions.

12.6 No 5-speed transmissions.

### 13 TIRES

#### SEE 250 TIRE POLICY FOR MORE DETAILS

- 13.1 Tires for 250 will be HOOSIER Track Tire. Available only from 660 on SPEEDWEEKEND. All tires must be stored at 660 until raceday.
- 13.2 Up to 8 new tires (max 4 right side tires) may be purchased for the event. Competitors may also transfer tires from their 660 or MPST inventory to use in the 250.
- 13.3 There will be no tire draw in 2011. Tire orders will be taken in advance by 660 and MPST.
- 13.4 **TIRE REGISTRATION:** Each team will be permitted to register up to 8 tires for use during the event. Each tire will have a serial number on it.  
**No substance of any kind is permitted inside or outside the tires. This will be checked with a "sniffer" type device and manual inspection.**

### 14 BRAKES

- 14.1 Four wheel brakes must work.

### 15 NUMBERS

- 15.1 Numbers must be on the roof, readable from the right side of the car, and on both front doors, at least 18 inches high and three inches wide.
- 15.2 Must have a six inch number on the top passenger corner of the windshield, painted white.
- 15.3 All numbers must be dark on a light background, or light on a dark background. No gold, silver, or trick numbers.
- 15.4 The driver will be notified of any numbers deemed difficult to score.

### 16 DRIVE SHAFT

- 16.1 Must be painted white and surrounded by two 1/4" (minimum thickness) safety hoops.

### 17 EXHAUST

- 17.1 Mufflers Mandatory: Max decibel reading of 110 at a distance of thirty feet.
- 17.2 **No stainless steel or carbon fiber headers, mufflers, pipes, etc are permitted.**
- 17.3 Recommended Howe 3002,3005,3006.
- 17.4 Exhaust outlet may be located either down and back under body or exit at right side of body. For side exit the outlet pipe must be mounted securely to the frame and be flush to the body with no sharp edges.

### 18 FUEL CELL

- 18.1 Maximum 22 U.S. gallons.

18.2 Must have at least 8" ground clearance.

## **19 DRIVER'S COMPARTMENT**

19.1 All cars must have a safe roll cage, constructed of 1-3/4" o.d., .090 wall steel tubing. The base of the upright members must be solidly welded to the frame.

19.2 Cage must be reinforced by side-to-side members.

19.3 Four side bars on drivers side are mandatory.

19.4 All roll cages must be approved by technical inspector.

19.5 All roll bars within drivers reach must be padded.

19.6 Approved aluminum racing seat and four point harness properly mounted to the cage is mandatory.

19.7 Crotch belt is recommended.

19.8 Belts must be dated no more than two years old.

19.9 Minimum belt width of three inches.

19.10 All cars must have an approved window net, properly installed in the left front window opening and must have a quick release. No string type nets allowed.

19.11 All cars must be equipped with a quick release steering wheel. Center of the wheel must be padded.

19.12 Battery must be mounted securely outside of driver's compartment by a non conductive cover.

## **20 BUMPER**

20.1 Maximum 2" diameter pipe or tubing.

## **21 COMMUNICATIONS**

21.1 Any team using talking and/or listening devices MUST provide track officials with all their frequencies.

21.2 **All frequencies MUST be able to be monitored by track officials.** No scrambling allowed.

21.3 **A scanner (monitoring track officials) must be attached to a spotter with direct communications to the driver.**

21.4 Any team using talking and/or listening devices MUST provide track officials with all their frequencies. Only 100, 400, and 800 MHZ frequencies allowed. NO 900 MHZ frequencies. All frequencies must be able to be monitored by official's multi-channel scanner with NO modification.

21.5 Teams MUST have 2 way communications with driver.

## **22      DRIVER PROTECTION**

- 22.1 The use of head and/or neck restraint system is recommended.
- 22.2 **Full face helmets MANDATORY.** Snell approved helmets only may be used.
- 22.3 Full fire suit in good condition is mandatory and must be used when ever the car is on the track.
- 22.4 Fireproof shoes and gloves are MANDATORY.
- 22.5 An approved fire extinguisher dated for the current year must accompany car at all times.
- 22.6 A full enclosure seat is strongly recommended
- 22.7 Industry approved head and neck restraint harness recommended

## **23      MISCELLANEOUS**

- 23.1 No electronic or manual traction devices.
- 23.2 No onboard wedge adjustments permitted.
- 23.3 Any new technology equipment must be approved by 660 before it can be used.
- 23.4 Track reserves the right to amend any rule with prior (fair) notice to competitors.
- 23.5 Cars that DO NOT conform to 660 rules will be assessed weight penalties accordingly or will be asked not to compete.
- 23.6 No Carbon Fiber or Titanium parts allowed.

**NOTE: any cars that do not conform to these rules and wish to compete with a pre-arranged penalty MUST present their case to Speedway 660 in advance of Sept 1<sup>st</sup> . For more information or any questions please call Speedway 660 Office at 506-455-3181**

**Speedway 660 reserves the right to confiscate and retain any parts or components that are deemed to be non-conforming to the rules set forth in these pages. The decision of track management will be final**



# APPENDIX A MSD IGNITION RULES

**NOTE:** For the 250 the requirement is that you run a 660 or MPST inventoried box **UP ON THE DASH**, you have all your wires visibly traceable, you have a 6 pin MSD #8170 with the female terminals installed in the male connector on the car harness end (wired as per diagram below) and you have a removable section of tach wire.

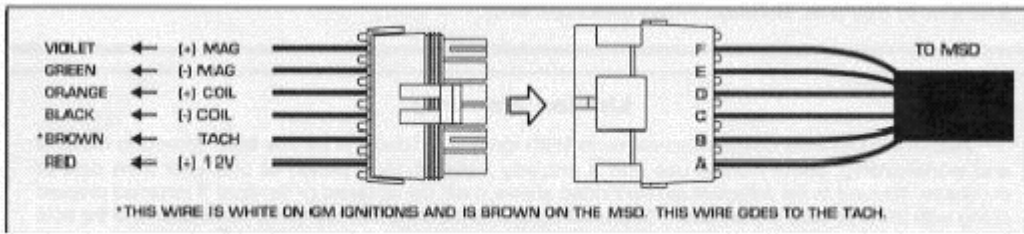
The tach wire leaving terminal B of the (MSD # 8170) connector is to have a removable section of wire (to start no more than 12" from the box) and be a minimum of 8" in length. This 8" section is not to be covered by the convoluted tubing. This 8" of wire will be removed prior to the car taking its first lap of competition and remain that way for the remainder of the event. The HEI distributor tach wire is also to be equipped with the same 8" removable section of straight wire that will be removed prior to competition.

**A car entering competition without an eligible box or module may have two options:**

**A : rent a box or module from 660 (\$40 per event)**

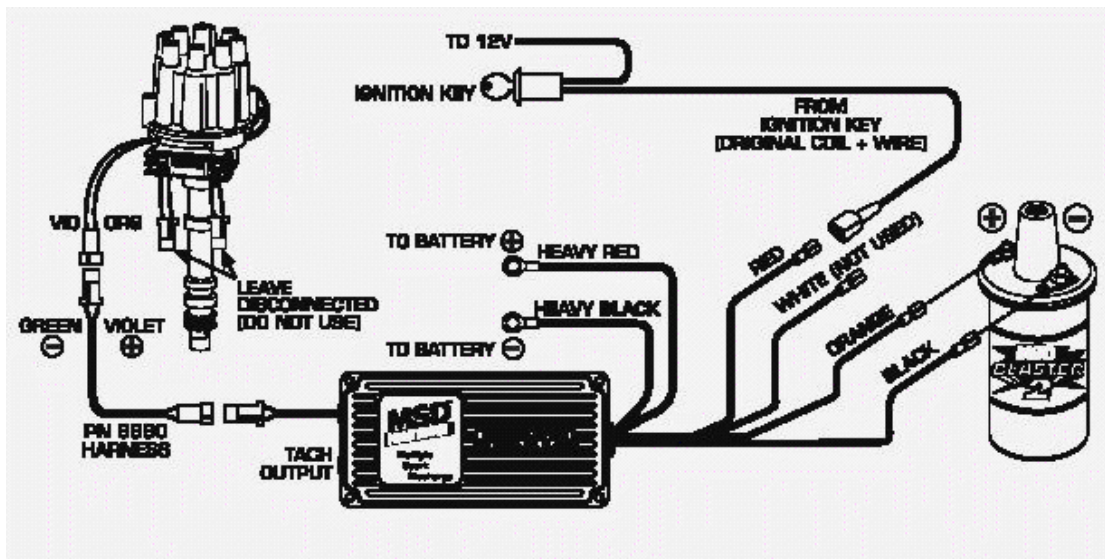
**B : use an eligible box or module from another competitor**

## APPENDIX MSD (WIRING DIAGRAM)



Above shows wiring order for connector installation on MSD 6AL and 6T Ignition Box

## MSD 6AL Wiring Diagram



## **APPENDIX B – 2003 AND OLDER BODIES**

- a. All bodies must be stock appearance, steel, fiberglass or aluminum.
- b. Bodies must be installed to meet ALL FiveStar dimensions and angles.
- c. Bodies must meet FiveStar templates with slight (approx 1/2 -3/4") tolerance at the base of windows.
- d. All vertical measurements will be made with driver out of car.
- e. Roof height must be a minimum of 46". Measured 10" from the top of the windshield on center.
- f. Max deck height will be 34.5" from the ground to the top of deck at base of spoiler (Dimension K)
- g. With the roof height at 46" and the rear deck height at 34 1/2" the gap between the template and the rear deck will be no more than 3/4 " at the base of the rear window and taper in a straight line to 0 at the spoiler.
- h. Template is expected to fit tight in all other areas.
- i. Nose must fit nose template with hood on and must comply with Dimension A
- j. Rear deck lid must be hinged or made easily removable. This will allow access to fuel cell for safety and inspection.
- k. You are allowed a 6.5" high, 60" wide rear spoiler (measured across front), with no side boxing.
- l. Rocker panel/skirt must run perpendicular to the ground. (I.e. straight up and down)
- m. Hood must be minimum of 15 lb, if weight must be added it must be molded into the hood and centered.
- n. Body and window panels must be braced sufficiently to prevent bowing at speed. Rear window brace MANDATORY.
- o. No cut down fenders or rear bumper covers.
- p. Body MUST have min 3.5" ground clearance at all points.
- q. Must run rear window.
- r. Passenger AND drivers side windows are permitted. They are not to be longer than 18" from the bottom corner of the "A" pillar rearward. Rear of window must be straight up and not bowed out.
- s. Floor plate must be a minimum of 1/8 inch thick metal
- t. A plate of 16 gauge metal approximately 15" x 30" must be mounted on driver's door between skin and roll cage.
- u. All jack positioners on cars must be positioned flush with or hidden beneath the door skin.
- v. Exterior rub rails will not be permitted.
- w. Roof and window rails (fins) will NOT be permitted.

- x. Non-conforming body clause: Long quarter paneled (+3.0") cars will be permitted to run provided they run a 5.0" x 60" spoiler. An additional penalty may be enforced for cars not adhering to Fivestar dimensions and is at the discretion of the tech officials.
- y. The Fivestar "Mother of Downforce" High Performance Body will be permitted providing it is not altered from manufacturers specs. Body will be required to add 75 lb. In addition this body will only run a 5.0"x 60" spoiler. DF bodies must fit long body template.
- z. ARP Monte Carlo (2002-2003) will be allowed to compete but must fit Fivestar roof and nose template and measurements. Also ARP body must run 5" spoiler. If 2003 nose is run car will carry a 25lb penalty
- aa. Any car with right side deck (right quarter panel at B pillar) exceeding 5.0" will carry a 25lb penalty (NOTE: This penalty is included in the downforce weight penalty. Downforce cars will carry the 75lb penalty, not 75lbs +25lbs for right side deck/shelf)
- bb. No Carbon fibre or light weight body panels allowed.
- cc. Roof "X" dimension (a point on A post to opposite outer edge of rear spoiler) shall not exceed 3" difference. Exceeding 3" but less than 6" require a 25lb weight penalty.

DISCLAIMER : The above body rules will be strictly enforced and may require additional modifications if necessary. This will be at the discretion of the tech officials.

## APPENDIX C – PASS Legal Cam change Engine

### PASS Engine Option #4

#### Crate Engine with Cam Change

GM Fastburn 385 ( P/N 12496769), Fastburn 400 (P/N 88958604), : This is a factory sealed crate engine package, complete from intake manifold, stamped steel valve covers with racing style breathers, and 8 quart dual kick-out circle track racing oil pan. The Fast Burn 400 engine has a 1053 forged steel crankshaft, aluminum heads with 2.00"/1.55" valves, hydraulic roller lifters, HEI distributor, and normal rotation iron water pump included. (400 HP at 5500 RPM - Torque 400 @ 4500 RPM) The base engine is a Fast Burn 350ci 385 horsepower, with the following parts:

P/N 10105123 4 bolt iron block – Must Remain Stock

P/N 14088533 1053 steel crankshaft – Must Remain Stock

P/N 10108688 PM rod – Must Remain Stock

P/N 10159436 High silicon aluminum piston – Must Remain Stock. NO “Eyebrowing” the pistons for clearance

P/N 10185071 Camshaft with hydraulic roller lifters – The camshaft may be changed (to any roller cam, rocker arm and lifter)

P/N 12464298 Aluminum head – Must Remain Stock. You may cut the heads .010 for clean-up. Minimum 60cc.

P/N 12496822 High rise single plane intake manifold, P/N 12366573 Aluminum dual plane (no EGR) or P/N 12496820 Aluminum dual plane (w/ EGR)– Must Remain Stock. Competitors competing with the original Fastburn 385 (intake manifold p/n 12366573 or p/n 12496820) may update to Fastburn 400 (p/n 12496822) if no changes (except for the camshaft, rocker arms and lifters) have been made.

P/N 25534354 8 quart oil pan or Moroso part #21319 pan is permitted with matching p/u assembly and utilized in factory form without modifications.

**Carburetors: Holley HP series 4-brl 650 (p/n 80541-1)**

**Crank height for all crate engines is 11”**