



## 2010 E-mod

All cars must have wrecker hookup. All cars should have 5 pound minimum fire extinguisher in reach of driver. All drivers should wear flame retardant fire suit, shoes and gloves. Window nets are highly recommended for all cars. No radios, communication equipment or mirrors permitted, including pit boards. No computer controlled equipment.

All parts specified as OEM/stock manufactured must be standard option parts or equivalent aftermarket parts and must be readily available from car dealer or any auto parts store. Casting numbers must remain on all OEM/stock parts.

### 1. MOTOR

*Weight limits may be adjusted during the season for competition. Motor violations may result in fine and/or suspension.*

**ALL CARS—V8** motors only. Motor must be based on factory design and naturally aspirated. 1 spark plug and 2 valves per cylinder. No titanium or exotic metals except titanium retainers—OK. No fuel injection, turbo chargers or blowers. Bell housing mounting flange surface at rear of engine must be at least 72" forward from the center line of the rear axle.

**Open 2,400** weight—Open cast iron block. Aluminum heads and intake permitted. Any type of cam allowed. Roller tappet—OK. Any type cast iron or aluminum pistons permitted.

**Limited 2,300** weight—**358** maximum ci limit. Cast iron block. No Bowtie blocks. Any stock production GM cast iron head, Bowtie head #10134392 with casting #14011034, or World Products heads #011150 or #012150. 60 cc minimum combustion chamber. Absolutely no porting, polishing, machining or clean up of heads or manifolds. Any single 4-barrel manifold. 350 stock steel crankshaft with 3.480 stroke. Crank may not be lightened. Flat top pistons. Standard diameter lifters—no mushroom lifters. No dry sump. No titanium or exotic metal engine parts

**604** Crate 2,400 weight—GM crate motor part #88958604. 9.1:1 maximum compression ratio.

**602** Crate 2,250 weight—GM crate motor part #88958602. 10:1 maximum compression ratio.

Crate motor must be purchased from an authorized dealer and MUST remain sealed at all times. GM factory encrypted bolts cannot be altered, removed or changed except by an authorized repair center. Absolutely no modification or changing of any internal engine part. No machine work permitted. **GM part number may not be removed.** Any motor modification will result in one year suspension and loss of all points and winnings. Any GM bolts that have been copied are considered trademark infringement and will be reported to the manufacturer for legal proceedings. Motor service or reassembly after tear down may only be performed at an authorized repair center and motor must be resealed with GM factory encrypted bolts. All motor repairs must be done with the same exact GM motor parts, listed in GM book part #88958668. **By using a crate motor in competition, the race team acknowledges all responsibility for the legality of the motor upon inspection at any event regardless of any previous motor verification.**

### 2. BODY

Must meet all specifications listed on diagram and be of open front-wheel design. Body line must be a flowing line from front to rear. 38" maximum, 28" minimum deck height at all points. 47" maximum rear quarterpanel length measured from center of rear wheel. 72" minimum from front of door panel to center of rear wheel. 4" minimum ground clearance. 2" minimum clearance around all wheels. 68" maximum body width at all points.

Quarterpanels must be same length and cannot extend higher than rear deck. Rear deck may not extend past quarterpanels and must extend between quarterpanels. Maximum 4" deck height increase from rear of hood to rear of car and maximum 2" deck height increase from rear of driver's seat to rear of car. Quarterpanels and doors may not dish inward. Skirting may not extend behind quarterpanel. 34" maximum, 22" minimum door height, measured from top to bottom of door.

All fenders, doors and quarterpanels should roll inward ½" to 1" at top, with sides over upper body. No sharp or jagged edges, fasteners, etc. No sharp or jagged edges, fasteners, etc. No ridges or fins permitted anywhere. No wings or tunnels permitted under body or chassis. Unapproved bodies may be assessed a 50 pound weight penalty.

### 3. NOSEPIECE, FRONT BUMPER AND HOOD

Engine compartment must remain open—no front fenders. Hood may drop 4" on sides and must be enclosed at rear. Hood must be level from side to side. Hood scoop may be maximum of 1" above air cleaner. 45" maximum nosepiece/front bumper measured from center of front hub with wheels turned straight. Nosepiece can be no wider than frame rails. No spoilers or ridges on nosepiece except crate motor spillboards.

Front bumper should have upper and lower loop running from frame end to frame end. Front bumper loops should be mounted to frame ends and constructed from 1 ¼" to 1 ¾" tubing. Bottom front bumper loop should be parallel to ground.



## 2010 E-mod

### 4. ROOF

Minimum **41"** long x **44"** wide, maximum **56"** long x **52"** wide. **42"** minimum height from ground, **52"** maximum. Roof must be mounted near center of car, parallel to deck and level. Roofline and side panel window contours should be stock appearing. Rounded rooflines are highly recommended. **No** wedge, bellied or hollow roofs. Rounded roofs may have a maximum drop of **5"** at the front and **2"** at the rear measured from the central breaking point, with the central breaking point within **6"** of the center of the roof. Flat roofs may have **1"** maximum height variance from front to rear. **No** gremlin-style roofs.

Rear roof and front roof supports mandatory. Bottom of rear roof supports may extend to end of rear deck. Rear roof supports must taper downward evenly from the outside edge of roof with a **2"** maximum outward bow both to the sides and rear. Roof and top of rear roof support may extend **9"** past center of rear wheel. Maximum **7"** vertical height at rear of roof post. **10"** high x **15"** long minimum rear support window is optional. Rear support window may be filled with clear lexan. **2"** minimum front roof post width, **4"** maximum. Front roof support braces may extend **7"** vertical and horizontal. Front roof posts must extend forward to the rear of hood.

**12"** minimum door window opening at center and rear of door window, measured from deck to roof. **18"** maximum door window opening height. **1.5"** maximum roll down permitted along front and rear edge of roof. **4"** maximum hinged sun shield permitted in front of driver.  $\frac{1}{2}$ " maximum bead rolls permitted on roof running from front to rear in direction, **4** maximum including edge bead rolls. Unapproved roofs will be assessed a **25** pound penalty.

### 5. SPOILERS

*Spoilers measurements may be adjusted during the season for competition.*

Spoiler and braces must meet all specifications listed on diagram. **68"** maximum width. Maximum **3** solid side spoilers permitted. Side spoilers must be mounted at rear of deck and outer side spoilers must be at outside edge of deck. Side spoiler must taper down evenly from maximum to minimum height and may be rounded or triangular in shape. An additional **1"** maximum flange can be used at the top of the rear spoiler and on side spoilers for strength. **2** additional **1"** open aluminum braces permitted. Spoiler should be clear lexan or aluminum. **No** driver-adjustable spoilers. Spoiler must be mounted at rear of deck. Spoiler may not be suspended to create a wing. **No** other spoilers or wings.

Open **2,400** weight—**8"** maximum vertical spoiler height measured from top of rear deck and **8"** maximum spoiler length measured along the angle of the spoiler. **8"** maximum side spoiler height from rear of side spoiler to **6"** forward of rear of side spoiler. **4.5"** maximum height at front of side spoiler. **18"** maximum side spoiler length. *Note that in the future spoiler may be reduced/eliminated on open motor cars*

Limited **2,300** weight—**8"** maximum vertical spoiler height measured from top of rear deck and **8"** maximum spoiler length measured along the angle of the spoiler. **8"** maximum side spoiler height from rear of side spoiler to **6"** forward of rear of side spoiler. **4.5"** maximum height at front of side spoiler. **18"** maximum side spoiler length.

**604** Crate **2,300** and **602** Crate **2,300** weight—**12"** maximum vertical spoiler height measured from top of rear deck and **12"** maximum spoiler length measured along the angle of the spoiler. **12"** maximum side spoiler height from rear of side spoiler to **10"** forward of rear of side spoiler. **4.5"** maximum height at front of side spoiler. **24"** maximum side spoiler length. **Two 4"** high x **32"** long spillboards permitted mounted on the nose. Spillboard may have a **1"** ridge running at 90 degrees along the top. Spillboard measured at mounted angle. **No** other ridges are allowed on the nose.

### 6. TIRES

**8"** maximum treadwidth E-mod type tires. Tires permitted are Hoosier **26.5/8.0-15 Hard, Medium, RC4, A40 & D40** and **27.5/8.0-15 Hard, Medium, RC4, A40 and D40**. **11-1/2"** maximum sidewall width. **No** tire softening. Siping and grooving—OK. **No** recaps. Tires must have all manufacturer's stamps intact.

### 7. WHEELS

**8"** maximum steel wheels only plus **1"** tolerance allowed for beadlocks. **No** aluminum, plastic wheels or carbon fiber wheels. **No** aluminum hubs. Wheels must be held on by bolt-type lug nuts, no knock-off type mounting permitted. **80"** maximum outside width at wheels with wheels pointed straight.

### 8. CARBURETOR

*Carburetor spacer rule may be included during the season for competition.*

One **2** or **4** barrel carburetor.

### 9. FUEL

Gasoline or alcohol. **No** nitrous oxide, nitro-methane or propylene oxide. **No** electric fuel pumps or pressurized fuel systems. Mechanical or belt-driven fuel pumps only. Fuel lines should not pass through driver's compartment.

### 10. DISTRIBUTOR

**No** magnetos permitted.



## 2010 E-mod

### 11. FRAME AND REAR BUMPER

**108"** minimum wheelbase, **112"** maximum. Complete OEM stock production frame required to **36"** forward from center of rear axle. Front snout frame rail width may not be modified. Front cross member may be notched for radiator clearance only. All other frame components should be constructed of minimum **2" x 2"** square steel tubing or **1 3/4"** outside diameter round steel tubing, with **.083"** minimum material thickness. All round tubing frame cars should use **4130** chrome molly steel or DOM in frame construction. No holes may be cut in frame. All other chassis tubing should be **1 1/2"** to **1 3/4"** outside diameter and minimum **.083"** thickness.

Car should have horizontal safety bar constructed from same steel tubing as frame, mounted behind fuel cell and securely welded to frame. Rear bumper should be at least **4"** behind fuel cell. Center of rear bumper and safety bar should be at rear deck center height, approximately **18"-19"** from the ground and should be at least as wide as frame. Tubing should also extend downward to form a horizontal bar at the bottom height of the fuel cell, with additional vertical and diagonal tubing bracing the lower tubing to the rear bumper and the safety bar. Lower tubing should be at least as wide as fuel cell. No part of the fuel cell should be below the protective tubing. Any rear bumper that extends more than **8"** from the rear of frame should be rounded and directed toward the front of car. Loop-style rear bumpers—OK. No sharp edges on bumpers. Car should have external rub rails between the wheels on both sides of car. Rub rails should be constructed from **1 1/4"** to **1 3/4"** round tubing and may not extend wider than tires.

### 12. SUSPENSION

Tube type upper a-arm allowed and can be repositioned. Aftermarket lower a-arms are permitted but must have stock dimensions and remain in stock location. Mono-balls are OK. OEM tie rod ends and adjustment sleeves may be replaced. **Steel, non-adjustable shocks only.** No coilovers on front suspension. Coilover eliminators and steel or aluminum coilover kits permitted on rear suspension only. Aluminum cross shafts—OK. No other aluminum, fiberglass or composite material suspension parts. Stock passenger car spindles required—no tube type or fabricated spindles. All other front suspension parts must be OEM stock production and in stock location.

Min **4.5"** outside diameter coil steel springs. All springs should be tethered or cabled to frame. Suspension must be mechanical—no computer or electronic components. No driver-controlled weight jacking equipment. No straight front axles.

### 13. STEERING

Steering and steering box must be stock production. Steering must use original bolt pattern for frame but may be modified inside cockpit for driver. No rack and pinion or center steering. Quick-release, racing-type steering should be used.

### 14. REAR AXLE

Any rear end permitted. Quick change—OK. No aluminum allowed except lowering blocks, axle cap, drive plate and wheel spacers.

### 15. TRANSMISSION AND DRIVE SHAFT

Any transmission permitted. Racing transmission—OK. Transmission should have explosion-proof bell housing or **360** degree **1/2"** steel scatter shield securely mounted to car. Any type clutch permitted and should have scatter shield. No in and out boxes. Transmission

### 16. TRACTION CONTROL

All traction control devices using wheel sensors are NOT permitted. Adjustable ping control devices, dial a chip controls, timing controls or automated throttle controls are NOT allowed in the cockpit or any other location accessible by driver. Any remote control components or data acquisition equipment are NOT permitted.

### 17. BRAKES

All cars must have **4** wheel braking system. Calipers must be stock manufactured steel only. Steel rotors only.

### 18. EXHAUST

Headers permitted. Exhaust pipes may NOT point towards ground. Mufflers are HIGHLY recommended for all cars.

### 19. STARTER AND BATTERY

All cars must be self starting. Failure to start during a race will result in disqualification. Battery should be located in a safe area and covered with a metal fireproof box. Battery should not be in driver compartment. Battery disconnect kill switch to shut down motor highly recommended mounted in reach of driver and should be clearly labeled for safety crew.



## 2010 E-mod

### 20. ROLL CAGE

4-post, box-type roll cage should be constructed of 1 ½" minimum outside diameter and .095 minimum thickness steel tubing. Roll cage should have at least 3 horizontal bars at driver's side door and 2 horizontal bars at passenger side door, extended outward into door panels with 2 vertical bars between each horizontal bar as additional support. An extra vertical side brace bar is recommended on the left side in line with steering wheel. Door bars should be 1 ½" in diameter with a minimum thickness of .065. Both door window areas should remain open and unblocked by roll cage bars for easy exit. Roll cage should extend forward on driver's side to protect foot area completely. Roll cage should be welded to frame in at least 6 places (in addition to diagonal bracing) and welded together at all intersecting points. Diagonal bars should brace roll cage at rear, and should run from frame to top of roll cage.

Top of roll cage should be at least 2" above top of driver's helmet. All areas of the cockpit should have at least 11" of clearance below the roll cage and roof. All roll cage bars within reach of driver should be covered with non-flammable foam padding. Other than padding, roll cage must remain exposed above top of door with no aerodynamic effects. Right-side padded headrest or head net recommended attached to roll cage. Bars or wire mesh in windshield and driver's side quick-release window net highly recommended.

### 21. FUEL CELL

32 gallon maximum, racing-approved fuel cell should be securely mounted inside a 20 gauge steel or .060" aluminum metal box and secured to frame with a minimum of two 2" x 1/8" thick steel straps around entire fuel cell. Minimum 7/16" bolts should be used to mount the fuel cell. The fuel pick up should be on the top or right side of the fuel cell, be constructed of steel and should have a check valve in case of roll over. Fuel cell should be mounted in square tubing frame. Fuel cell should be mounted behind the rear axle and between the rear tires, at least 4" in front of the rear bumper. 9" minimum fuel cell ground clearance. No part of the fuel cell may be lower than the rear end housing. Car number must be displayed on fuel cell, 6" minimum height.

### 22. FIREWALLS AND INTERIOR

A full metal firewall at front, rear, sides and floorboard should be joined to seal off driver compartment. Full metal floorboard. Top of interior to top of doors should be 3" maximum. Interior should be mounted flush with outside body panels. 12" minimum interior clearance below roll cage at all points for easy exit.

### 23. SEAT AND SAFETY BELT

Metal racing-approved seat with padded headrest should be securely attached to frame. 3", 5-point, quick release racing belt with double harness should be bolted to frame or roll bars. Mounts should run in the same direction to secure the belt. Belt should not come in contact with sharp edges. Safety belts should be replaced if two years old, and all worn or damaged safety belts should be replaced.

### 24. FIRE SUIT AND HELMET

Drivers should have flame retardant firesuit and racing approved full-face helmet with face shield. Nomex shoes, gloves, and hood highly recommended. Neck collars and arm restraints recommended.

### 25. WEIGHT

*Weight limits may be adjusted during the season for competition.*

Car weight must be declared with weight sticker on left front roof support. Cars without weight sticker must weigh the highest minimum weight. Cars must meet all listed rules under declared weight category.

2,400 pound minimum weight with driver after race for Open cast iron motors. 2,300 weight for cars with Limited, 604 Crate or 602 crate motors. No tolerance. All weights should be solid material, entirely painted white or a bright color and marked with car number. Each weight should be 50 pound maximum. Weights should be bolted to frame with two ½" Grade 5 bolts on two weight clamps or secured with steel plate. No weights should be attached to rear bumper or in driver's area. Weights should not be lead pellets or liquid. Each weight should be bolted to the frame individually and should not be stacked on another weight.

**RULEBOOK DISCLAIMER:** The rules and/or regulations set forth herein are designed to provide for the orderly conduct of racing events and to establish minimum acceptable requirements for such events. These rules shall govern the condition of all events, and, by participating in these events, all participants are deemed to have complied with these rules. NO EXPRESSED OR IMPLIED WARRANTY OR SAFETY SHALL RESULT FROM PUBLICATIONS OF OR COMPLIANCE WITH THESE RULES AND/OR REGULATIONS. They are intended as a guide for the conduct of the sport and are in no way a guarantee against injury or death to a participant, spectator or official. The race director shall be empowered to permit reasonable and appropriate deviations from any of the specifications herein or impose any further restrictions that in his opinion do not alter the minimum acceptable requirements. NO EXPRESSED OR IMPLIED WARRANTY OF SAFETY SHALL RESULT FROM SUCH ALTERATION OF SPECIFICATIONS. Any interpretation or deviation of these rules is left to the discretion of the officials. Their decision is final.

## 2010 E-mod GM Crate Motor Specs



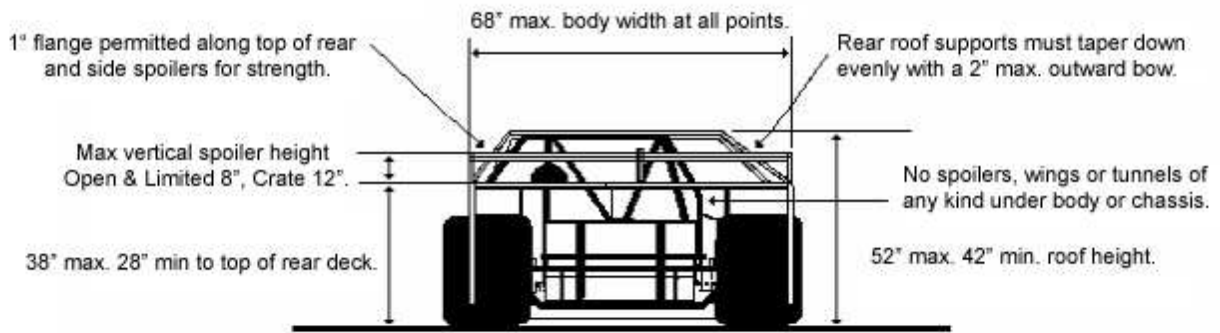
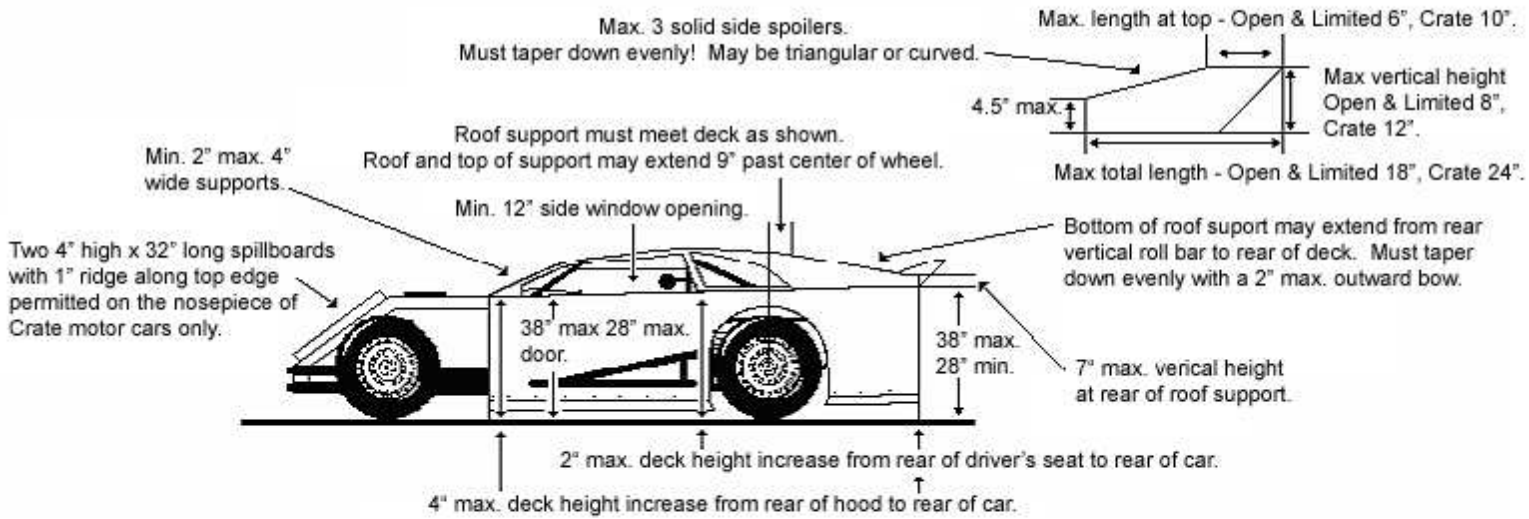
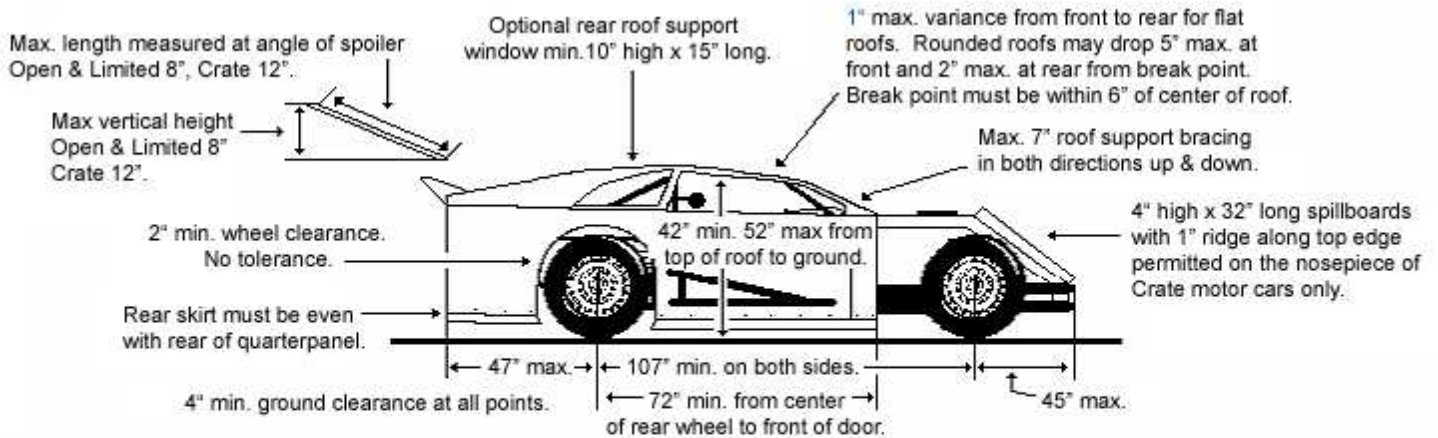
### GM 602 350/350

|                              |  |
|------------------------------|--|
| Block part number            | #10105123  |
| Block type                   | cast iron with 4-bolt main caps  |
| Bore x stroke (in)           | 4.00 x 3.48  |
| Camshaft duration (@.050 in) | 212 degree intake / 222 degree exhaust   |
| Camshaft lift (in)           | .435 intake / .460 exhaust   |
| Camshaft part number         | #24502476  |
| Camshaft type                | hydraulic flat tappet  |
| Compression ratio            | 9.1:1  |
| Connecting rod part number   | #10108633  |
| Connecting rods type         | powdered metal steel   |
| Crankshaft part number       | #14088526  |
| Crankshaft type              | nodular iron   |
| Cylinder head part number    | #12558060  |
| Cylinder head type           | vortec iron; 64cc chambers   |
| Displacement (cu in)         | 350  |
| Engine name                  | Circle Track 350/350   |
| Engine type                  | Chevy small-block V-8  |
| Ignition timing              | 32 degree total @ 4000 rpm with vacuum advance disconnected  |
| Maximum rpm                  | 5500   |
| NOTE                         | Distributor included with 350/350 engine has melonized steel gear part number #10456413. This MUST be used with engines with steel camshafts, or engine damage will occur. |
| Piston part number           | #12514101  |
| Pistons type                 | hypereutectic aluminum   |
| Recommended fuel             | 92 octane  |
| Rocker arm ratio             | 1.5:1  |
| Rocker arms part number      | #10089648  |
| Rocker arms type             | stamped steel  |
| Valve size (in)              | 1.94 intake / 1.50 exhaust   |

### GM 604 350/355

|                              |  |
|------------------------------|--|
| Block part number            | #10105123  |
| Block type                   | Cast iron with 4-bolt main caps  |
| Bore x stroke (in)           | 4.00 x 3.48  |
| Camshaft duration (@.050 in) | 208 degree intake / 221 degree exhaust   |
| Camshaft lift (in)           | .474 intake / .510 exhaust   |
| Camshaft part number         | #10185071  |
| Camshaft type                | Steel hydraulic roller   |
| Compression ratio            | 10:1   |
| Connecting rod part number   | #10108688  |
| Connecting rods type         | powdered metal steel   |
| Crankshaft part number       | #12556307  |
| Crankshaft type              | forged steel   |
| Cylinder head part number    | #12556463  |
| Cylinder head type           | Aluminum; 58cc chambers  |
| Displacement (cu in)         | 350  |
| Engine name                  | Circle Track 350/355   |
| Engine type                  | Chevy small-block V-8  |
| Ignition timing              | 10 degree BTDC @ 800 rpm 32 degree total @ 4000 rpm with vacuum advance disconnected   |
| Maximum rpm                  | 5800   |
| NOTE                         | Distributor included with the 350/355 engine has a melonized steel gear part number #10456413. This MUST be used with engines with steel camshafts, or engine damage will occur. |
| Piston part number           | #10159436  |
| Pistons type                 | hypereutectic aluminum   |
| Recommended fuel             | 92 octane  |
| Rocker arm ratio             | 1.5:1  |
| Rocker arms part number      | #10089648  |
| Rocker arms type             | stamped steel  |
| Valve size (in)              | 1.94 intake / 1.50 exhaust   |

# 2010 E-mod Body Specifications



All side spoilers must be same dimensions and outside side spoilers must be mounted at edge of deck.

