

## Section 10

### LATE MODEL DIVISION

3/17/14 REVISION

General Rules and Regulations

RULES AT A GLANCE

Stock or Fabricated Perimeter Chassis

**2900 lbs Total minimum Weight with driver** after any points paying or qualifying event NO  
ADDING FLUIDS (adjustable with weight and left side percentage penalties)

**58% Left Side Weight Maximum.** (adjustable with weight penalties)

**105" to 108" wheelbase**

**80" Max Width (sidewall to sidewall at center spindle height)**

#### WEIGHT PENALTIES

Non Stock lower control arms + 50LBS and -1% left side

Rack steering +25LBS.

Wide 5 Wheels +25LBS

Non-compliant engine + 50LBS -1%left

Any Steel Racing head + 50LBS

Non OEM Spindles +25LBS -1%left

Non OEM Steel or Aluminum Brake Calipers + 50LBS

**MAXIMUM 200 Lbs and -2% left penalty to any car. Exception: SRL/Tour Cars**

500 CFM Two Barrel Carburetor

361 Max cubic inches - 11.5 to 1 compression

GM Crate engine part #88958604. Irwindale and KCR ZZ4 "Crate Motor" seals will be honored.

Any Aluminum racing head must use 1-1/4" restrictor plate between the 2 bbl carburetor and intake manifold.

5" Min. Diameter Springs

Steel Non-adjustable shocks

OEM steering box

OEM steel spindles (and steel hubs)

OEM steel brake calipers

8" wheels

#### NOTE:

**108" wheelbase or longer, leaf-spring or stock four-link rear suspension late models may use unmodified Edelbrock Performer manifold (part no. 2101) with an unmodified 4 bbl Holley 4150 750 cfm double-pumper carburetor (part no. 0-4779c). Any equivalent 4 bbl carburetor may be acceptable upon tech approval. As an Alternate, Steel racing heads may be used with a 4412 2 bbl. carb as indicated above but without penalty. If equipped with steel racing heads, addition of 4 barrel would trigger 50Lbs. penalty. Contact SWS Tech if you plan to run these combinations - No Exceptions.**

NOTICE: ALL EQUIPMENT IS SUBJECT TO THE APPROVAL OF TECH OFFICIALS. NO EQUIPMENT WILL BE CONSIDERED AS HAVING BEEN APPROVED BY REASON OF HAVING PASSED THROUGH INSPECTION. ALL MEMBERS ARE REQUIRED TO BE FAMILIAR WITH ALL SWS TRACK RULES AND ALL RULES IN THEIR DIVISION.

## **10-1 BODY REQUIREMENTS**

**10-1.1** this class is open to the following American made, passenger car, production sedans: Chevrolet Monte Carlo/Lumina; Dodge-Intrepid/Charger;Pontiac-grand prix;Ford-Thunderbird/Taurus/Fusion; Buick- Regal; Oldsmobile-Cutlass. Manufactured sedan type automobiles 1993-2007 allowed. No station wagons, jeeps, convertibles or rear engine models. Any body not listed here may be approved with prior written notice to SWS.

**10-1.2** All bodies must be neat appearing and stock as produced by manufacturer. Bodies must be constructed of steel, aluminum, or fiberglass. Carbon fiber and or Kevlar components are NOT permitted.

**10-1.3** Flat or slab sided bodies are NOT permitted. Body components must match for the entire body, (i.e.: Intrepid nose, doors, rear bumper, etc.)

**10-1.4** The nose and grill area may be cut for the installation of air ducts only. The rear bumper may not be altered, modified, or drilled.

**10-1.5** Approved front air dams must have a minimum of three (3") inches ground clearance. A full rear filler panel is required.

**10-1.6** Belly pans are NOT permitted.

**10-1.7** Exterior nerf bars or any other type of external supporting devices are NOT permitted.

**10-1.8** Interior of the car must be totally isolated from engine compartment and fuel cell, with firewalls of minimum 20 gauge steel. All holes must be sealed with metal.

**10-1.9** Rear spoiler maximum six (6.5") inches high. Overall length may not extend beyond top edge of quarter panels. Any materials listed may be used for base, but top four (4") inches must be clear LEXAN.

## **10-2.0 WINDOWS**

**10-2.1** A windshield made of clear LEXAN must be used. Minimum thickness of 1/8 inch. Windshield Must be supported between the dashboard and roof halo bar. An Earnhardt bar with minimum diameter of 1-1/2" is recommended.

**10-2.2** Each car must have a rear window made of clear LEXAN. Rear windows must be flat and not dished from roof to deck lid.

**10-2.3** All side window glass must be removed. A right side window of any type is NOT permitted.

**10-2.4** Driver side window net is required on all cars. Net material must be a minimum One (1") inch wide webbing. Net must be equipped with a quick-release device on the top left front corner facing the outside of car.

**10-2.5** Vent window permitted, maximum length Six (6") inches measured for bottom of A Pillar.

### 10-3 HEIGHT, WEIGHT, WIDTH AND CHASSIS DIMENSIONS

<u>Wheelbase</u>	<u>Total Weight</u>	<u>Left Side Percentage</u>
105 Inch Min	2900 Lbs (w/Driver)	58%

**10-3.2** Maximum width is Eighty (80) inches measured from tire Sidewall to Sidewall at spindle height.

**10-3.3** All cars must maintain a minimum of eight (8") inches of ground clearance measured at the bottom of the fuel cell can. **There must be a minimum of three (3") inches of ground clearance under the entire car without driver after race. No time will be allowed for car to rise from tie down shocks.**

**10-3.4** Added weight must be in minimum five (5#) pound blocks, must be painted white and must have car number clearly visible on each piece. All added weight must be attached with a minimum of two (2) ½ inch, grade 5 bolts. Must meet tech approval.

**10-3.5** All cars must have a minimum of ten (10") inches clearance between the center of the crankshaft and the ground.

### 10-4 ENGINE REQUIREMENTS

**10-4.1** Eligible engines will be production engines as determined, selected, and approved by SWS. Using GM crate motor part #88958604 will be allowed as long as all factory seals are in place. If any seal is found to be tampered with or missing, the engine is no longer legal for competition (without weight added to car). **Irwindale and KCR ZZ4 "Crate Motor" seals will be honored.**

**10-4.2** Only stock, OEM cast iron engine blocks are permitted. Stroke to remain stock for block used. No 400 c.i. blocks.

**10-4.3** Angle cutting the engine block deck is NOT permitted.

**10-4.4** Maximum engine displacement is 361 cubic inches including wear measured by SWS equipment.

**10-4.5** Maximum engine compression ratio is 11.5:1 measured by SWS equipment.

**10-4.6** Any aluminum piston may be used. A minimum of three (3) rings per piston is required.

**10-4.7** No titanium is permitted in the engine with the exception of valve retainers. Only magnetic steel valves and valve springs are permitted.

**10-4.8** Cylinder heads must be SWS approved and all modifications must be submitted to SWS before any proposed modifications will be eligible for approval. All manufacturers' identification and part numbers must remain on the part being used for competition.

**10-4.9** All cylinder heads must be of cast iron construction and produced by the OEM manufacturer in quantities readily available. All cylinder heads for use on Ford or Chrysler engines must meet With prior tech approval before they will be considered legal for use in competition.

**10-4.10** A maximum of three (3) angle valve job will be permitted. When cutting the valve seat angles, stone grinding marks will not be permitted above the bottom of the valve guide. All cutting in reference to the valve job and bowl area must be centered off the centerline of the valve guide. Radius cuts will NOT be permitted. Upon completion of the valve job, the bowl area above the valve seat to the bottom of the valve guide must still be the same configurations as far as shape and finish as it was from the manufacturer. Surfaces and/or edges where the cutter or stone has touched must NOT be polished. Hand grinding or polishing will NOT be permitted on any part of the head except for matching of intake ports.

**10-4.10a** Port matching of intake of cylinder head to intake manifold will be permitted. Metal may be removed for purpose of matching only. Removal of metal may extend a maximum of ¼” from mating surface into intake port of cylinder head toward valve, and ¼” from mating surface into runner of the intake manifold.

**10-4.11** Resurfacing or milling on the gasket surface only is allowed.

**10-4.12** No other modifications are allowed. No porting (other than listed above), polishing or removal of material from any surface of the cylinder head by any means mechanical, chemical or any other way not listed.

**10-4.13** The maximum valve size as measured across the face of the valve is as follows:

A. Intake – 2.050 in.      B. Exhaust – 1.625 in.

**10-4.14** Valve must be made of steel or stainless steel.

**10-4.15** Valve stem centerlines must remain in the OEM location and dimension for the heads being used.

**10-4.16** Camshaft must be a solid steel lifter type. Hydraulic or flat-tappet lifters are permitted and must maintain original manufacturers’ stock diameter.

**10-4.17** Mushroom, roller or roller type lifters are NOT permitted. Camshaft must be designed so that each lifter maintains contact with each lobe at all times.

**10-4.18** Independent stud, roller rocker arms, and stud girdles are permitted. GM, Ford, and Mopar shaft rockers are permitted.

**10-4.19** Only standard OEM magnetic steel or cast iron production crankshafts will be permitted.

**10-4.20** Crankshaft must weigh a minimum of 50 pounds and cannot be altered in any manner, such as knife edging. Stroke not to be increased or decreased. Balancing is permitted.

**10-4.21** Connecting rods must be solid, magnetic steel. Aluminum, titanium, stainless steel or hollow rods are NOT permitted.

**10-4.22** The intake may be port matched a max. of ½ inch into the intake ports of the head.

**10-4.23** A maximum of one (1) inch thick adapter may be used between the carburetor and intake manifold.

**10-4.24** All carburetors will be one 2 barrel carburetor with P.N. #4412 Holley (casting number 3250) 1 -11/16" throttle bore or holley, Keith Dorton #80583 1 – 11/16" throttle bore.

**10-4.25** The ONLY approved modifications are as follows:

- A. The choke air horn may be removed with a square mill cut.
- B. The butterflies may be drilled with one (1) idle hole each, max of 3/16" diameter.
- C. Cam and accelerator pump may be replaced with aftermarket.
- D. The choke and linkage may be removed, but screw holes must be filled.

**10-4.26** Engine must use a wet sump oiling system. Dry sump or external pumps are NOT permitted.

**10-4.27** An accusump type auxiliary oil reservoir is permitted.

## **10-5 AIR CLEANERS AND FILTERS**

**10-5.1** No cold air induction allowed. Standard air cleaners only.

**10-5.2** Air deflector allowed. 180 degree maximum.

**10-5.3** Paper air filter element required.

**10-5.4** No cold air boxes. No vacuum leaks.

**10-5.5** The element, filter assembly or area around these items may NOT be sprayed or soaked with any type of chemical, liquid or gel.

## **10-6 ENGINE LOCATION AND MOUNTS.**

**10-6.1** Engine must be located so that the forward most spark plug hole is within two (2") inches of the ball joint closest to said spark plug.

**10-6.2** Crankshaft must be centered within One (1") inch of the vehicles screw jacks.

**10-6.3** All mounts must be securely bolted. Adjustable mounts are NOT permitted.

**10-6.4** Minimum clearance between the center of the crankshaft and the ground must be Ten (10) inches.

## **10.7 ELECTRICAL SYSTEM**

**10-7.1** Stock type ignition . (A) 1 MSD system Box Only allowed. (B) Magnetos, crank trigger, optically triggered or computerized systems are NOT permitted.

**10-7.2** All cars must be equipped with a functioning starter located near the stock location.

**10-7.3** All cars must be equipped with a master electrical switch located in the cockpit of the car. The switch must be within reach of the driver and safety crew from both sides of the car.

**10-7.4** Batteries must be securely mounted behind the driver, forward of the rear end housing and contained in electrically insulated container. Dry cell batteries are NOT required to be contained in leak proof containers.

## **10-8 ENGINE COOLING SYSTEM**

**10-8.1** Radiators must be stock appearing and remain in the stock location.

**10-8.2** Anti-freeze is NOT permitted for use in the cooling system. Water wetter is allowed.

**10-8.3** A minimum ne (1) quart overflow catch tank is required in all cars. Catch tank must be located in the engine compartment with a hose protruding onto lower right edge of windshield.

**10-8.4** Water pump must be mechanically driven, must be located in the stock location and must rotate in the same direction as the crankshaft.

## **10-9 ENGINE EXHAUST**

**10-9.1** Cast iron exhaust manifolds or headers permitted. 1 5/8 inch primary tubes with three (3") inch collectors.

**10-9.2** Exhaust pipes from header collector to mufflers is a maximum diameter of three (3) inches'. **If a two into one "Y" pipe is used, maximum inlet size is 3". Maximum outlet size is 5"**

**10-9.3** Over the top headers allowed. 180 degree headers will not be permitted.

**10-9.4** Exhaust must extend past the driver. Mufflers are mandatory. 5" maximum inlet and outlet of mufflers.

## **10-10 DRIVE TRAIN**

**10-10.1** Only OEM type manual or automatic transmission may be used.

**10-10.2** Minimum diameter of clutch plates and discs must be 5 1/2" minimum diameter.

**10-10.3** Scatter shields are required and subject to tech approval.

**10-10.4** Flywheel must be constructed of aluminum or steel only.

**10-10.5** Drive shafts must be constructed of magnetic steel and painted white.

**10-10.6** Drive shafts must have two (2) 360 degree safety straps. One (1) front and one (1) rear as close to the u-joint as possible, constructed of 1/8" x 2" steel.

**10-10.7** Aftermarket Floater rear ends are Mandatory. Cambered rear ends are NOT permitted.

## **10-11 FRAMES/CHASSIS/ROLL CAGES**

**10-11.1** Stock or fabricated chassis may be used. Perimeter chassis only.

**10-11.2** Roll cages must be constructed of steel with a minimum outside diameter of one and three quarter inches (1-3/4") and a minimum wall thickness of .090 inches.

**10-11.3** The left side door area must have at least three (3) complete horizontal bars between the pillars and two (2) vertical bars extending from the windshield opening to the frame.

**10-11.4** The right side door area must have at least two (2) horizontal door bars between the pillars and two (2) vertical bars extending from the windshield opening to the frame.

- 10-11.5 Drivers' door bar plate must be 1/16" thick steel placed top to bottom front to rear upright. Must be welded to outside of bars.
- 10-11.6 All roll cages and welds are subject to tech approval.
- 10-11.7 Any areas of the roll cage that may in any way come in contact with the driver must be padded using dense foam padding specifically manufactured for use as racing roll bar padding. The use of pipe insulation wrapping is not permitted.

**10-12 SUSPENSION**

- 10-12.1 OEM lower control arms are mandatory. Must be equal length and from same manufacturer. Screw in type ball joints permitted. No other modifications allowed.
- 10-12.2 Sway bar heim joints are permitted.
- 10-12.3 Tubular upper A arms permitted.
- 10-12.4 Minimum coil spring diameter is 5".
- 10-12.5 Bottom coil spring mounts must be located on the lower control arm and top mount must be securely attached to the chassis in the stock OEM location. Coil over suspension is not permitted.
- 10-12.6 All control arms must be constructed of magnetic steel. Aluminum cross shafts are permitted.
- 10-12.7 Static weight jacking devices are permitted. No operator-controlled, radio-controlled, computer-controlled or automatic traction control devices, weight-transfer, weight-shifting, or weight-altering devices. Brake bias control is the only "in car" adjustment permitted.
- 10-12.8 Shocks must be steel, oil filled only. No adjustable shocks are permitted.
- 10-12.9 Stock OEM spindles, magnetic steel only. **Non OEM Spindles +25LBS -1%left**
- 10-13 **SUSPENSION (REAR)**
- 10-13.1 Independent rear suspension is not permitted.
- 10-13.2 Minimum coil spring diameter is 5".
- 10-13.3 The rear springs must be mounted in the same manner on each end of the rear end housing. Rear coil springs require cable running through spring to keep spring with car.
- 10-13.4 Static weight jacking devices are permitted. No operator-controlled, radio-controlled, computer-controlled or automatic traction control devices, weight-transfer, weight-shifting or weight-altering devices. Brake bias control is the only "in car" adjustment permitted.
- 10-13.5 Shocks must be steel oil filled only. No adjustable shocks are permitted. No external reservoirs. 1 shock per wheel
- 10-13.6 All links must be solid. No dampening devices permitted.

**10-14 STEERING COMPONENTS**

- 10-14.1** A SWS approved quick release steering wheel is required.
- 10-14.2** Steering columns must be collapsible. Two U-joints are acceptable.
- 10-14.3** **Rack and pinion steering allowed with 25LB penalty**
- 10-14.4** All steering heim joints and tie rods may be constructed of magnetic steel or aluminum.
- 10-14.5** All welding of steering components must meet SWS Tech approval.
- 10-14.6** Steering wheels must have a Two (2") inch thick pad in the center.

**10-15 BRAKES**

- 10-15.1** Disc brakes with magnetic steel, non-coated rotors are permitted. Drum type rear brakes are permitted.
  
- 10-15.2** Brakes must be functional at each wheel at all times.
- 10-15.3** Brake bias valves are permitted. Aftermarket, racing brake master cylinder assemblies are permitted.
  
- 10-15.4** OEM style steel calipers only. Steel only aftermarket rotors and hubs are allowed.  
**Aftermarket steel or Aluminum calipers OK with 50 lb Penalty**

**10-16 FUEL SYSTEMS**

- 10-16.1** Fuel may not be cooled by any means.
- 10-16.2** All cars must be equipped with an approved fuel cell securely mounted in the trunk area as far forward as possible.
  
- 10-16.3** Fuel cell must be mounted with steel framework (1" x 1" .060 inch minimum) and attached with a minimum of Four (4) Three Eighths inch (3/8") bolts to the frame rails. Fuel cell must have a vent hose and the hose must have a ball style check valve in the end.
  
- 10-16.4** Fuel cell must be totally enclosed in an 18 gauge steel box with a ½ inch drain hole in the lower right rear corner. Ground strap required from fill neck to frame. Fuel cell cap must have a tether.
  
- 10-16.5** Glass fuel filters, electric fuel pumps and belt driven fuel pumps are not permitted.
- 10-16.6** If fuel line runs through Drivers' compartment, it must pass through a metal tube sealed at both ends.
  
- 10-16.7** The gasoline shall not be blended with alcohols, ethers, or other oxygenates. No E85 Fuels.
- 10-16.8** All cars must have a minimum of Two (2) throttle return springs. Throttle return springs must be attached to the engine.



**10-17 TIRES AND WHEELS**

**10-17.1** Fifteen inch (15”) magnetic steel wheels with a maximum width of Eight inches (8”) are required. Wide Five wheels permitted with **25LB penalty**

**10-17.2** Only One (1) valve stem per wheel. Air bleeders are not permitted.

**10-17.3** Use of the SWS track specified tire is mandatory. **HOOSIER 970 or 700.**  
**NO EXCEPTIONS**

**10-17.4 AS A COST CONTROL MEASURE, A TIRE RULE WILL BE IN EFFECT FOR THE LATE MODEL DIVISION**

**Purchase of tires at SWS is NOT mandatory.  
Registration of tires at SWS IS mandatory**

- a. On opening night, each competitor attempting to qualify and compete may present for registration by SWS tech, a maximum of (6) SIX new tires or scuff/take off tires. (HOOSIER 970 or 700) Any race thereafter each competitor who has a car attempting to qualify and compete in that evenings event may register a maximum of (1) ONE new or scuff/take off tire. These tires must all be registered to that car and may not be exchanged
- b. Any competitor not present opening night will be permitted 1 new tire or scuff tire at first appearance of the season, and 3 raced take offs per tech approval. These tires must all be registered to that car prior to qualifying that day and may not be exchanged.
- c. Tires may only be presented to tech for registration on race day.
- d. Tires may be logged retroactively for races attended if tires are not registered that day.
- e. Any tires used for qualifying, heats or any other points paying events must be logged by serial number to the bank of tires allowed for that car. Tires registered to bank of tires for each car may be new, take offs or scuffs.
- f. In the event that that a tire or tires are cut or otherwise damaged in an on track incident rendering the tire un-usable, it may be exchanged with a take off tire of similar state of wear upon approval of SWS Tech. Any damaged tire attempting to be replaced must be inspected by SWS tech official before replacement will be considered and must be presented before leaving the track on the day the damage occurred. Any replacement tires will be logged replacing any damaged tires in the tire bank for that car.
- g. Tires may be checked at any time following a qualifying session or points paying race event to ensure that tires mounted to car are registered to the tire bank for that car. Non-registered tires will be cause for post race or qualifying disqualification.
- h. “Burnouts” and tread wear will not be considered race damage suitable for consideration of replacement.
- i. Use of any tire, any make, any compound, registered or not, is permitted during any open practice or testing session.

## **NOTES:**

All cars that do not conform to the SWS Late Model rules must add weight before competing in a race with SWS Late Model Cars.

Super Late Model cars may run 8" wide 5 wheels with a 970 or 700 Hoosier tire. See added weight penalty above

**Any Super Late Model, SRL/Southwest Tour car fitted with wide 5 wheels not able to conform to the SWS Late Model maximum track width rule may participate subject to a penalty of .5% left side per 1 inch of additional width. Measurements will be rounded to nearest whole inch for weight penalty assessment. {i.e. 2.7 inches wide will be assessed the 3" penalty (1.5% left side penalty) , 2.4 inches wide will be assessed the 2" (1% left side penalty.)}**

All super late models must meet a minimum weight 3100 with 56% left side car and driver. Super late model cars conforming to the SWS rules must also supply and have installed a 1 ¼ " restrictor plate.

S.R.L. / South West Tour cars must meet a minimum weight of 3200 lbs with 56% left side weight car and driver. S.R.L. / South West tour cars conforming to the SWS rules must also supply and have installed a 1 ¼ " restrictor plate.

All cars will run the #4412 Holley two barrel carburetor.

**STI Super Trucks may compete with Late Models at SWS.**

**Trucks must meet the following criteria.**

STI general rules apply

STI Spec motor or 602 motor

Weight – 2800 lbs. 56 percent left. (2700 lbs per truck rules +50lbs -1% left for lower control arms and +50lbs -1% left for coil overs.

Must run LOCKED rear end per STI rules

970 or 700 tire – No Exceptions – Subject to track tire rules

AMENDMENTS: may be made at any time. If so they will be posted on web page. Racers will have one race to meet new changes unless a different agreement is made with officials..