



## **Mountain Motor Pro Stock**

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Mountain Motor Pro Stock is for naturally aspirated entries only, meeting the specific rules of the category as listed below. Mountain Motor Pro Stock (MMPS) is contested on a .400 pro tree and is qualified based off of elapsed time, from quickest to slowest. This is a 16- car field unless there are fewer than 13 cars entered, in which it reverts to an 8-car field with a professional pairing ladder.

All rules are subject to change at any time given the sole discretion of the IHRA Technical Services Department.

#### **MINIMUM WEIGHT REQUIREMENTS ALL WEIGHTS INCLUDE DRIVER AT CONCLUSION OF RUN**

Mountain Motor Pro Stock, equipped with Lenco Transmission – 2,400 lbs.

Mountain Motor Pro Stock, equipped with Liberty Transmission – 2,400 lbs.

#### **Weight Additions/Reductions:**

- Add 15 lbs. for 16x18-Inch Rear Wheels
- Add 20 lbs for (8) individual coil pack ignition systems

#### **REQUIREMENTS & SPECIFICATIONS ENGINE: 1**

##### **CARBURETION**

Limited to any two 4-barrel carburetors. American automotive carburetors available to the general public with any internal modifications. Carburetors may be split.

##### **CYLINDER HEADS**

Cylinder heads must be configured after OEM or IHRA accepted pattern and must be available to the general public. Heads must be aluminum or cast iron. Maximum of two (2) valves and one (1) spark plug per cylinder.

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Billet versions of the current accepted cast heads are allowed, no changes/modifications allowed. Max valve size of 2.800" intake and 2.100" exhaust. Distance from deck surface to valve cover rail may not be more than 6.700". Head stud locations may not be moved. All billet cylinder heads must be submitted for verification and approval before being run in competition.

### **ELECTRONIC FUEL INJECTION**

EFI controller manufacturer, model, firmware and software must be approved for use by the IHRA Technical Services Department and must be commercially available to all competitors prior to use in competition. Maximum of 16 injectors placed in any location above the cylinder head. EFI controller must operate in an open loop configuration with no connection to oxygen sensor or EGT sensor. EFI controller can output to data logger only. Wiring harness cannot contain provisions for oxygen sensors and must have specific part number approved by the IHRA Technical Services Department prior to use in competition. EFI controller can only send data to data logger, not receive. EFI controller cannot monitor any performance criteria of the vehicle including acceleration, drive shaft, wheel speed, track position, etc. The only sensors to be utilized and/or monitored with the EFI controller are coolant temperature, fuel pressure, IAT (inlet air temperature), MAP (manifold air pressure) and TPS (throttle position sensor). Competitors may utilize either two 4-blade or four 2-blade throttle bodies. Throttle bodies must be installed with throttle blades in a horizontal location. Forward facing throttle bodies are not permitted. Throttle bodies must be production units commercially available to all competitors prior to use in competition. Intake manifold must be of conventional design with no active components (i.e., runners). Inlet air must be drawn from a single opening, forward facing hood scoop of conventional design. EFI and carburetor cannot be combined on an intake manifold.

### **ENGINE**

Internal combustion, reciprocating, naturally aspirated, single camshaft, 90degree V-8 automotive-type mandatory. Crankshaft centerline must intersect cylinder bore centerlines and be symmetrical. Cubic inch is limited to 833 CID Hemi and 843 CID on Wedge entries, no tolerance. Blocks may be aluminum or cast iron. No magnesium or other materials allowed. One distributor maximum. Only one crank or cam (Hall Effect) type sensor permitted and must be connected to ignition control module only. Maximum 5" bore spacing. Every engine must have an individual Serial No. given by engine builder. The Serial No. must be in a clearly visible place on the cylinder heads and block. All moving engine components must be accepted prior to utilization. Additionally, the use of beryllium, carbon fiber/kevlar, ceramic, or composites are prohibited from use on these components. The rod and main bearing assemblies must be of conventional sleeve design.

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### **ENGINE CONTAINMENT SYSTEM**

SFI 7.1 lower engine containment system required. If a flexible SFI 7.1 system is utilized, it must be accompanied by a carbon fiber or aluminum belly pan with a minimum 2-inch vertical lip.

### **EXHAUST**

Open exhaust with headers mandatory. Side exit exhaust systems prohibited. All removable multi-piece exhaust collectors/stacks must be securely fastened with either an IHRA-accepted header tether, a minimum ½" (half inch) stitch weld located on each primary tube or be permanently attached to the vehicle body or frame with positive fasteners (i.e., exhaust hangers, support brackets, bolts/nuts, etc.) such that they require tools for removal.

### **FUEL**

All entries must utilize VP Racing Fuels' Q16 or C23 only. The use of propylene oxide, nitrous oxide, methanol, nitromethane, or any other additive is prohibited.

### **FUEL SYSTEM**

One SFI 28.1 front-mounted fuel cell mandatory, with pressure cap be vented outside of body. Trunk mounted fuel system prohibited. Fuel circulating systems that are not part of the fuel system are prohibited. All fuel cells must be mounted between frame rails and protected by 1-1/4-inch x .065-inch chrome-moly tubing.

## **REQUIREMENTS & SPECIFICATIONS DRIVETRAIN: 2**

### **CLUTCH**

SFI Spec 1.2 Clutch Assembly required. Release bearing engagement/disengagement must be manually operated by the driver's foot. The use of electronics, pneumatics, hydraulics, or any other device is prohibited from affecting clutch operation. Lock up units prohibited as all clutch levers must attached to the pressure ring. Clutch assembly must be contained in an SFI 6.1 or 6.3 bellhousing.

### **DRIVELINE**

Full 360-degree drive shaft tube required over yoke, extended from transmission tail shaft a minimum length of 12-inch required from transmission tail shaft. Minimum thickness of tube housing is .050-inch chrome moly or titanium. Two-piece accepted with minimum six (6) 3/8-inch grade 8 bolts.

### **FLYWHEEL SHIELD**

SFI 6.1 or 6.3 with current certification. See SFI 6.1 or 6.3 for motor plate requirements.

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### **REAR END**

Automotive type required. Aftermarket axles required with 5/8-inch stud bolts and axle retention device. Welded spider gears prohibited. Full floating or live axle assembly is optional.

### **TRANSMISSION**

Only two permitted (Lenco or Liberty). Automated shifters and electronic timed shifters are prohibited. Multi-functional single button shifters prohibited. If a pneumatic shifter is used, each shift must be activated by its own individual control button. Routing of pneumatic shifter lines must be IHRA accepted prior to competition. All pneumatic shifter lines act independently and not a result of or activate other air or electric systems on the entry. Torque converter equipped automatic transmissions prohibited.

### **REQUIREMENTS & SPECIFICATIONS BRAKES & SUSPENSION: 3**

#### **BRAKES**

Four-wheel brakes are mandatory with dual master cylinder mounted above frame rails on all entries. Steel brake lines are mandatory.

#### **SUSPENSION**

Full automotive production systems are required. Minimum, one hydraulic shock absorber per wheel. Fabricated units permitted. Lightening of stock components prohibited. Rigid mounted suspensions or straight front axles are prohibited.

#### **WHEELIE BARS**

Permitted. Non-metallic wheels required. Maximum length of wheelie bar of 80-inches from center of housing to center of wheelie bar wheel.

### **REQUIREMENTS & SPECIFICATIONS FRAME: 4**

#### **BALLAST**

250 lbs. maximum. Shot bags must be contained in weight box. Ballast attached on or in front of the forward cross member is limited to 40 lbs. maximum, including bracket. The bracket may not exceed 12" in length, measured from the cross member, attached with a minimum of (4) 1/2" bolts. The maximum distance from the front of the bracket to the front of the motor plate is 36". Any car found with unsecured or illegal ballast following a run will be disqualified from the event at discretion of the IHRA Technical Services Department.

#### **CHASSIS**

SFI 25.1 E certification required.

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### **DRIVER**

Must be in stock location. Driver's seat to be no less than 24-inches from center of rear axle to seat back (where shoulder harness passes through).

### **ENGINE SETBACK**

Maximum setback is 80.125-inches as measured from the center of the rear axle to the back of the engine block. Modifications to the block that would permit additional setback are prohibited.

### **GROUND CLEARANCE**

Minimum 3-inches from front of car to 12-inches behind centerline of front axle, 2-inches for remainder of car.

### **WHEELBASE**

Minimum 100 inches, Maximum 105 inches. Maximum variation is 1-inch, side to side.

## **REQUIREMENTS & SPECIFICATIONS TIRES & WHEELS: 5**

### **TIRES**

Slicks permitted. Must be automotive type designed for racing. All tires must have manufacturer, model and size information clearly designated if used in competition. Clearance from outside of front tire to inside of fender at widest point not to exceed 4". Rear tire clearance 3" from outside of tire to inset of fender at widest point. Inner liners accepted. No Radial Tires allowed.

### **WHEELS**

SFI 15.1 bead-lock rear wheels mandatory. Maximum width 18".

## **REQUIREMENTS & SPECIFICATIONS INTERIOR: 6**

### **HEAD PADDING**

SFI 45.2 head padding required on both sides and top of roll cage.

### **SEAT**

Driver's seat must be minimum 24-inches high. Seat must be foamed with energy-absorbing material and formed to the driver's body and covered with a minimum one-layer, flame-retardant material. Seat frame must be installed as a permanent part of the chassis.

### **WINDOW NET**

SFI 27.1 required. Must be updated at 2-year intervals from date of manufacture. Mechanism for release must have red label and in visible sight for track officials to use externally.

**REQUIREMENTS & SPECIFICATIONS BODY: 7**

**APPEARANCE**

All vehicles must be professionally finished, painted, lettered, numbered and decaled.

**BELLY PAN**

Required. Must extend beyond leading edge of engine and accessories and incorporate a 2-inch vertical lip on the front edge of all units.

**BODY**

Must be 2000 or later model year factory produced 2 door coupes and sedans. Sports cars, sedan deliveries and trucks prohibited. Original OEM body shell or IHRA accepted composite replacement required. Chopping, channeling, sectioning, or other alterations to contour, length or width are prohibited. All composite replacement parts must be IHRA accepted and exact duplicates of OEM components and may not be modified. The front end may be lengthened in the cowl area to facilitate body relocation and wheelbase modifications. The maximum front-end overhang on all entries is 45 inches.

**HOOD AND HOOD SCOOP**

Hood and or hood scoop limited to one opening only. The highest point of the hood scoop may not exceed 15" in overall height above the original hood surface, measured from the leading edge of the scoop. Must be finished and painted to follow body paint scheme. Hood must be stock size with no bubbles. Cowl section may be molded to hood. A minimum of four fasteners must be used on the leading edge of all lift-off hoods. Sensors, lines, or wires, etc. are prohibited from being in hood scoop.

**REQUIREMENTS & SPECIFICATIONS**

**ELECTRICAL: 8**

**BATTERIES**

Maximum of two (2) batteries is permitted. Battery must be securely fastened. Must have an operational external master electrical shutoff marked, "PUSH OFF."

**IGNITION**

Aftermarket electronic ignition boxes may not be modified from factory specifications. If digital ignition system has internal programmable retard functions, all the external wires that can activate similar functions must be clearly disconnected and removed from the wiring harness. (Ex. MSD 7530, 7530T and 75301 (pink, tan, violet and white wires). MSD 7730 power grid system allowed, provided the MSD 7720 (Ignition Module), MSD 7740 (4 connector CAN-Bus Hub) and /or MSD 7751 (Launch Control Module) are the only products used to complete the ignition system. The 5 individual step retard wires (pink, violet, tan, light green and green)

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must be clearly disconnected. Any electronic traction control device prohibited. Coil-per cylinder accepted.

### **MASTER CUT-OFF**

Mandatory.

### **TAILLIGHTS**

One functional taillight is mandatory. Flashing, blinking or strobe lights are prohibited.

## **REQUIREMENTS & SPECIFICATIONS SUPPORT GROUP: 9**

### **COMPUTER**

Permitted.

### **DATA RECORDER**

Permitted.

### **FIRE EXTINGUISHER SYSTEM**

SFI 17.1 system mandatory. System must contain a minimum of 5-pounds of fluid or gas fire suppression agent. One nozzle required inside driver's compartment must be directed at driver's feet. Two or more nozzles must be directed at front of engine and fuel cell.

### **TOW VEHICLES**

Permitted. Tow/push bars must be labeled with reflective tape and/or bright color or striping for safety precautions. A valid driver's license is required to operate any type of tow vehicle. All passengers must be seated inside of the vehicle with all doors closed. Riding in open hatchback, trunk or cargo area is not allowed. ATVs are allowed with a maximum of one passenger who must always be seated. Golf carts are allowed with a maximum of four passengers who must always be seated. Posted pit speeds must always be obeyed. If pit speed is not posted, maximum pit speed will be 10 miles per hour.

## **REQUIREMENTS & SPECIFICATIONS**

### **DRIVER: 10**

### **CREDENTIALS**

IHRA Pro Stock license is required.

### **DRIVER RESTRAINT SYSTEM**

SFI 16.1 current certification required, 7-point system recommended. Beginning Jan 1, 2027, 7-point belts required.



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### **HEAD AND NECK RESTRAINT**

SFI 38.1 required. An aluminum or accepted carbon-fiber skid plate located above driver's head is recommended.

### **HELMET**

Snell SA-2015 or newer required. Use of open face helmet prohibited. Eject Helmet Removal System (Part # SDR 890-01-30) or equivalent required.

### **PROTECTIVE CLOTHING**

A driver's suit meeting SFI Spec 3.2A/15, gloves meeting SFI 3.3/5 and shoes meeting SFI 3.3/5.

### **RF SHUTDOWN RECEIVER**

Properly functioning Electrimation shutoff device (Part # SB001 and RF001) recommended. IHRA will utilize Electrimation safety shut-off device at all IHRA national events.

### **ROLL BAR PADDING**

SFI 45.1 mandatory anywhere driver's helmet may come in contact with roll cage components. Additional padding mounting on flat stock and fastened to the roll cage on both sides of the driver's helmet, mandatory.

### **REQUIREMENTS & SPECIFICATIONS EFI/DATA LOGGING APPROVED LIST:**

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**Big Stuff 3**

**EFI Technology – R8**

**FuelTech**

**Haltech**

**Holley EFI**

**RacePak**