



Car Preparation Guide for the Mojave Magnum 2018

To assist our racers, we have prepared this condensed list of the requirements to run a car at the Mojave Magnum. This list is unofficial and may not be 100% complete. It simply spells out the major requirements. The Mojave Magnum 2018 Rule Book is the official authority. All drivers must be 18 or older. All entrants must have a current, valid US/Canada/UK/EU driver's license; see the Rule Book for further details.

ROOKIE NOTE: If you have never competed with us at Mojave before, you will initially be placed in Class D, with a speed limit of **170** mph. This is regardless of any other experience elsewhere. Upgrades to a higher class are available using the normal process; see the Rule Book.

ANYTHING ATTACHED TO THE CAR WITH SUCTION CUPS MUST BE TETHERED OR TAPED DOWN. Painter's tape is not acceptable for this. This applies both inside and outside the car.

Anywhere "Nomex" is specified, "Carbon-X" is also allowed.

Cars up to 170 MPH: (Auto Class D)

1. Cars going up to a limit of **170 MPH** will enter into the **Auto D Class (AD)**.
2. **To enter Class D you must have:**
 - a. At least an MKM D license (no prior experience needed)
 - b. A car in good shape with no leaks or loose parts
 - c. Working suspension and shocks, and hydraulic brakes, on all four wheels
 - d. Good tires that are:
 - i. not worn out, repaired, plugged or recapped
 - ii. at least "W" or "Z" speed rated (with a possible Tech exception for slow cars)
 - iii. manufactured in 2012 or later (date code ends in "12" or higher)
 - iv. matching from side to side (same make/model/size L&R)
 - v. not a mixture of radial and bias ply
 - vi. at least 175mm/7in. in width, on wheels that are at least 13 inch diameter and at least 5 in. wide
 - vii. inflated to at least 25 PSI
 - e. Metal tire valve stem caps (not just metal-coated plastic) with "O" rings
 - f. Factory-type 3-point seat/shoulder belts minimum
3. Convertibles must have some kind of rollover protection behind the driver or they cannot run.
4. Class D requires the following minimum personal gear:
 - a. An open face auto racing helmet with shatterproof (ANSI Z87.1) eye protection, or (much preferred) a full face auto racing helmet with a face shield
 - b. The helmet must be labeled with one of the following certifications:
 - i. Snell SA2010, SAH2010, SA2015; or FIA 8859 or 8860
 - c. A Nomex racing head sock/balaclava is required for those with long hair or a beard
 - d. Non-synthetic (100% cotton) full coverage (high neck, long sleeve, long pants) clothing, socks and underwear. You may also wear an SFI 3.2A/1 or higher driving suit if you wish.
 - e. Leather gloves with no holes, covering the wrist (no golf gloves)
 - f. Leather topped shoes with no holes or vents (no athletic shoes)
5. **You cannot use any of the following:**
 - a. **any kind of motorcycle helmet**
 - b. a helmet that is rated DOT, or novelty or shorty helmets
 - c. just a lap belt (cars with just a lap belt cannot run)
 - d. 4-point 2-inch belts ("tuner" or "off road" belts)
 - e. wheels over 20 inches diameter (unless they are factory OEM, or specifically designed for racing)
 - f. aluminum lug nuts, lug bolts, or wheel studs (unless they are factory original parts, on a car that came with them from the factory, and you can prove it)
 - g. Drag Slicks, except for the DOT Drag Radials on our tire list
 - h. Tech Speed (speed limit) for Class D is **170 MPH**.

Cars up to 190 MPH: (Auto Class C)

1. Cars going faster than 170, up to a limit of **190 MPH**, will enter into the **Auto C Class (AC)**.
2. **To enter Class C you must have:**
 - a. At least an MKM C license (prior Mojave experience above 160 mph)
 - b. A car in good shape with no leaks or loose parts
 - c. Working suspension and shocks, and hydraulic brakes, on all four wheels
 - d. Good tires that are:
 - i. not worn out, repaired, plugged or recapped
 - ii. at least "Y" speed rated
 - iii. manufactured in 2012 or later (date code ends in "12" or higher)
 - iv. matching from side to side (same make/model/size L&R)
 - v. not a mixture of radial and bias ply
 - vi. at least 175mm/7in. in width, on wheels that are at least 13 inch diameter and at least 5 in. wide
 - vii. inflated to at least 25 PSI
 - e. Metal tire valve stem caps (not just metal-coated plastic) with "O" rings
 - f. Factory-type 3-point seat/shoulder belts minimum
3. Convertibles must have some kind of rollover protection behind the driver or they cannot run.
4. Class C requires the following minimum personal gear:
 - a. A full face auto racing helmet with face shield, certification labeled as meeting one of these specs:
 - i. Snell SA2010, SAH2010, SA2015; or FIA 8859 or 8860
 - b. A "horse collar" type helmet support (a HANS type device is highly recommended if feasible)
 - c. A Nomex racing head sock/balaclava is required for those with long hair or a beard
 - d. An SFI 3.2A/1 or higher rated driving suit with non-synthetic (cotton) socks/underwear.
 - e. Leather gloves with no holes, covering the wrist (no golf gloves)
 - f. Leather topped shoes with no holes or vents (no athletic shoes)
 - g. Nomex racing gloves/socks/shoes are highly recommended.
5. **You cannot use any of the following:**
 - a. an open face helmet
 - b. **any kind of motorcycle helmet**
 - c. a helmet that is rated DOT, or novelty or shorty helmets
 - d. just a lap belt (cars with just a lap belt cannot run)
 - e. 4-point 2-inch belts ("tuner" or "off road" belts)
 - f. Class-D type street clothes
 - g. wheels over 20 inches diameter (unless they are factory OEM, or specifically designed for racing)
 - h. aluminum lug nuts, lug bolts, or wheel studs (unless they are factory original parts, on a car that came with them from the factory, and you can prove it)
 - i. Drag Slicks, except for the DOT Drag Radials on our tire list
6. Tech Speed (speed limit) for Class C is **190 MPH**.

Cars up to 220 MPH: (Auto Class B)

1. Cars going faster than 190, up to a limit of **220 MPH**, will enter into the **Auto B Class (AB)**.
2. **To enter Class B you must have:**
 - a. At least an MKM B license (prior Mojave experience over 180 MPH)
 - b. A car in good shape with no leaks or loose parts
 - c. Working suspension and shocks, and hydraulic brakes, on all four wheels
 - d. Good tires that are:
 - i. not worn out, repaired, plugged or recapped
 - ii. at least (Y) (in parentheses on the tire) speed rated, or listed on the Mojave DOT Race Tire list
 - iii. manufactured in 2012 or later (date code ends in "12" or higher)
 - iv. matching from side to side (same make/model/size on each axle)
 - v. not a mixture of radial and bias ply
 - vi. at least 175mm/7in. width, on wheels that are at least 13 inch diameter and at least 5 in. wide
 - vii. inflated to at least 25 PSI
 - e. Metal tire valve stem caps (not just metal-coated plastic) with "O" rings
 - f. A racing **ROLL BAR** (Appendix R1 in Rule Book) (some specific cars may be exempt from this, see the Rule Book)
 - g. SFI 16.1,16.5, or 16.6 or FIA approved 5, 6, or 7 point 3-inch racing harnesses (Appendix H in Rule Book). A 2 year grace period is allowed for harnesses labeled with expiration or validation dates; those with made-on dates must be less than 5 years old.
 - h. SFI 3.3 racing **arm restraints**
3. Class B requires the following minimum personal gear:
 - a. A full face auto racing helmet, with a face shield (not goggles), certification labeled as meeting one of these specs:
 - i. Snell SA2010, SAH2010, SA2015; or FIA 8859 or 8860
 - b. a HANS or other SFI 38.1-type or FIA 8858 Head and Neck Restraint system
 - c. A racing-approved fire suit
 - i. rated SFI 3.2A/5 or FIA 8856-2000, OR
 - ii. rated SFI 3.2A/1 (or 3.2A/3) IF you also wear a full set of Nomex long underwear, under the suit
 - d. Nomex auto racing gloves
 - e. Nomex racing socks and Nomex-lined racing shoes
 - f. A Nomex racing head sock/balaclava
4. **You cannot use any of the following:**
 - a. an open face helmet
 - b. a helmet that is rated DOT
 - c. a motorcycle, kart or rally-type helmet
 - d. standard OEM-type seat belts/harnesses
 - e. Y-type or one-piece V-type shoulder belts
 - f. 4-point 2-inch "tuner" or "ATV" harnesses
 - g. wheels over 20 inches in diameter (unless they are factory OEM, or specifically designed for racing)
 - h. aluminum lug nuts, lug bolts, or wheel studs
 - i. Drag Slicks, except for the DOT Drag Radials on our tire list
5. Tech Speed for Class B is **220 MPH**.

Cars up to 240 MPH: (Auto A Class)

1. Cars going faster than 220, up to a limit of **240 MPH**, will enter into the **Auto A Class (AA)**.
2. **To enter Class A you must have:**
 - a. At least an MKM A license (prior Mojave experience over 205 MPH)
 - b. A car in good shape with no leaks or loose parts
 - c. Working suspension and shocks, and hydraulic brakes, on all four wheels
 - d. Either good 4-wheel disc brakes, or a parachute system, or a special MKM exemption.
 - e. Racing tires (“Not for highway use” or “For Racing Purposes only”) that are:
 - i. not worn out, repaired, plugged or recapped
 - ii. Hoosier R7s, or true non-DOT high-speed dry-paved-track racing tires, or LSR tires
 - iii. manufactured in 2012 or later (date code ends in “12” or higher if it exists)
 - iv. matching from side to side (same make/model/size L&R)
 - v. not a mixture of radial and bias ply, except for narrow bias drag or LSR fronts on a car with a chute
 - vi. at least 175mm/7 in. width (115mm/4.5 in. width with parachute)
 - vii. on wheels that are at least 13 inch diameter and at least 5 in. wide (4 in. wide with parachute)
 - viii. inflated to at least 25 PSI
 - f. Metal tire valve stem caps (not just metal-coated plastic) with “O” rings
 - g. A racing **ROLL CAGE**, bolted or welded in (Appendix R2 in Rule Book)
 - h. SFI 16.1,16.5, or 16.6 or FIA approved 5, 6, or 7 point 3-inch racing harnesses (Appendix H in Rule Book). A 2 year grace period is allowed for harnesses labeled with expiration or validation dates; those with made-on dates must be less than 5 years old.
 - i. SFI 3.3 racing arm restraints
 - j. SFI 17.1 or FIA-approved 5-lb onboard racing fire suppression system with the release in reach of the driver (this requirement is waived if the engine is behind the driver and has a sealed metal firewall, and a 2.5lb 10BC fire extinguisher is securely mounted within easy driver reach while belted in.)
 - k. a well-made, supportive driver’s seat; some stock seats may not suffice
3. Class A requires the following minimum personal gear:
 - a. A full face auto racing helmet, with a face shield (not goggles), certification labeled as meeting one of these specs:
 - i. Snell SA2010, SAH2010, SA2015; or FIA 8859 or 8860
 - b. a HANS or other SFI 38.1-type or FIA 8858 Head and Neck Restraint system
 - c. A fire suit rated SFI 3.2A/5 or FIA 8856-2000, or higher, with a full set of Nomex racing long underwear
 - d. Multi-layer (SFI 3.3/5 type) Nomex auto-racing gloves
 - e. Nomex racing socks and Nomex-lined racing shoes
 - f. Nomex head sock/balaclava (multi-layer preferred)
4. **You cannot use any of the following:**
 - a. an open face helmet
 - b. a helmet that is rated DOT
 - c. a motorcycle, motocross, kart or rally helmet
 - d. 4-point 2-inch “tuner” or “ATV” harnesses
 - e. standard OEM-type seat belts/harnesses
 - f. Y-type or one-piece V-type shoulder belts
 - g. wheels over 20 inches (unless they are factory OEM, or specifically designed for racing)
 - h. aluminum lug nuts, lug bolts, or wheel studs
 - i. Drag Slicks or Drag Radials
 - j. Any DOT tire except the Hoosier R7
5. Tech Speed for Class A is **240 MPH**

Cars above 240 MPH: (Auto Class U)

1. Cars going faster than 240 MPH must enter into the **Auto U Class (AU)**.
2. **To enter Class U you must have:**
 - a. an MKM U (Unlimited) license (prior Mojave experience over 220 MPH, plus approval by the Event Director)
 - b. A true race car, with construction comparable to NASCAR Speedway or SCTA Bonneville cars
 - c. No leaks or loose parts
 - d. Working suspension and shocks, and hydraulic brakes, on all four wheels
 - e. An approved parachute system (a waiver of this requirement is possible; see the Rule Book, Appendix A.)
 - f. Non-DOT dry-paved-track true racing tires ("For Racing Purposes only" or "Not For Highway Use"), or Hoosier R7 Radials, or LSR tires, that are:
 - i. not worn out, repaired, plugged or recapped
 - ii. manufactured in 2012 or later (if a date code exists, it must end in "12" or higher)
 - iii. matching from side to side (same make/model/size L&R)
 - iv. not a mixture of radial and bias ply, except for narrow drag "front runners" or LSR fronts
 - v. at least 115mm/4.5 in width, on wheels that are at least 13 inch diameter and at least 4 in. wide
 - vi. inflated to at least 25 PSI
 - g. Metal valve stem caps (not just metal-coated plastic) with "O" rings
 - h. A full welded-in-place tubular steel racing **ROLL CAGE** (Appendix R2 in Rule Book)
 - i. SFI 16.1,16.5, or 16.6 or FIA approved 5, 6, or 7 point 3-inch racing harnesses (Appendix H in Rule Book). A 2 year grace period is allowed for harnesses labeled with expiration or validation dates; those with made-on dates must be less than 5 years old.
 - j. SFI 3.3 racing arm restraints
 - k. SFI 17.1 or FIA-approved 10-lb (or dual 5 lb) onboard racing fire suppression system with the releases in reach of the driver
 - l. a foam-filled bladder type racing fuel cell in a metal shell with rollover shutoff valve
 - m. a sealed metal firewall between the engine and driver compartments
 - n. A one-piece no-hinge no-springs true racing seat made of metal or approved composite, attached to the roll cage
 - o. NASCAR-type window netting on the driver's side, attached to the roll cage
 - p. A racing-type electrical master shutoff switch, easily visible and clearly labeled, operable by the driver or from outside the car
 - q. A quick-release removable racing steering wheel with padded hub
 - r. A 360 degree driveshaft safety loop of at least ¼ inch steel, one inch wide, at the front of the driveshaft, if applicable
 - s. Wheels designed for racing speeds
3. Class U requires the same clothing and personal gear as Class A.
4. **You cannot use:**
 - a. an open face helmet, a helmet that is rated DOT, or a motorcycle, motocross, kart or rally-type helmet
 - b. 4-point 2-inch "tuner" harnesses
 - c. standard OEM-type seat belts/harnesses
 - d. Y-type or one-piece V-type shoulder belts
 - e. wheels over 20 inches unless specifically designed for racing
 - f. aluminum lug nuts, lug bolts, or wheel studs
 - g. Drag Slicks, Drag Radials, or any DOT street-legal tire except the Hoosier R7
 - h. GM-type rear axles with C-clips unless C-clip eliminators are installed
 - i. wheel studs or lug bolts less than 12mm or ½" diameter (example: a lot of GM cars originally came with 7/16 studs. These would have to be changed.)
5. Tech Speed for the AU class is Unlimited.