

## 4.1: Axles

W.E.ROCK considers axles to be the link between wheels on both front and rear ends. This application begins at the end of the drive shaft and ends at the flange for wheels. It does not include brake assemblies.

The following are the axle guidelines for competition:

**4.1.1:** Total track width of no more than 80" unless the proclaimed vehicle came wider from the factory. This is measured from the outside of the tire to the outside of the opposite tire.

**4.1.2:** All axles must be mechanically differentiated (geared).

**4.1.3:** IFS or solid axles are allowed.

**4.1.4:** Axles must be located in such a way that the only change to wheelbase is due to reactive forces.

**4.1.5:** No manual or mechanical change of axle wheelbase is allowed.

**4.1.6:** Both Differentials must use some form of 100% locking device.

**4.1.7:** Vent tubes must be attached to a fluid containment container.

**4.1.8:** Portal axles are not approved for conversion.

## 4.2: Body

W.E.ROCK considers the body to be the vehicles outer layer and includes the floor, sides, rear, hood, fender, grill, and firewall.

The following are the body guidelines for competition:

**4.2.1:** Overall body measurements (height & width) must conform to OEM specifications for proclaimed vehicle.

**4.2.2:** Proclaimed vehicle must have a minimum production run of 500 vehicles per production year. (clarification)

**4.2.3:** Body must be original OEM or W.E.ROCK approved OEM replacement, this includes hood, fenders, cab, front clip, tub and bed.

## 4.3: Grill

**4.3.1:** Grills must be an OEM configuration ([Dimensions](#), [height](#), [width](#)) and size and approved by W.E.ROCK.

**4.3.2:** The grill must cover the entire front portion of the radiator.

**4.3.3:** Grills must also include two headlights. Grills must also include two headlights. Headlights may be substituted with in-grill off road driving lights in the factory location and approximate to the factory sizing.

**4.3.4:** Grills may not be narrowed from factory widths.

**4.3.5:** Grill Height must retain original height line in relation to the body height. The grill must be raised or lowered the same measurement at the body, if the body is moved.

**4.3.6:** Grill mounting points must retain stock hood height and configuration. (Maintaining Stock look)

## 4.4: Hood

**4.4.1:** Must cover the entire engine compartment and follow the factory form. Hood must retain OEM "slope" front to back and side to side.

**4.4.2:** OEM hoods may be substituted for hoods made of different material as long as it conforms to factory configurations.

**4.4.3:** One-piece hood and fenders are approved as long as they resemble the factory look, or follow the factory configuration.

## 4.5: Fenders

**4.5.1:** Vehicles must have an outer front fender. Front inner fenders must be maintained from the radiator back to the centerline of the front shock absorber, stretching from the outer fender down to a distance no greater than 3" from the top of the frame.

**4.5.2:** Fenders must be mounted to the main portion of the passenger compartment or cowl and extend to the grill.

**4.5.3** All fenders that retain the integrity of the original vehicle's "image" will be approved. Example: creating a "flat-fender" style look and adding that to a CJ7 will be acceptable. Fenders must retain stock width for the entire fender; a rounded front corner is allowed to a radius no wider/larger than 6", OEM width is required up to the hoods side latch attachment points, from there the hood may angle in to the grill.

**4.5.4:** Vertical material may be trimmed. The original body line of the fender and hood must remain OEM.

**4.5.5:** Front fenders can not be cut to clearance shocks

**4.5.6:** Front inner fenders must cover the area from the front of the radiator to the center of the front shock; complete front inner fenders must have a 3" hole that can be used for fire suppression.

**4.5.7:** Rear inner fenders must be retained.

**4.5.8: *All vehicles must*** retain their original back body corner designs (no dovetailing permitted). ***All vehicles must have rear lights for stop/turn and driving. After market lights may be used.***

#### **4.6: Tub/Cab**

**4.6.1:** Must house two front passenger seats mounted side by side at both the left and right side of the vehicles passenger compartment on the same horizontal plane.

**4.6.2:** General condition must be in good shape without excessive rust or damage that would warrant concern for safety.

**4.6.3:** Excessive body damage, as determined by a W.E.ROCK official, is not approved.

**4.6.4:** All OEM tub/cab configurations are approved for competition. Aftermarket tubs must be OEM width and W.E.ROCK approved.

**4.6.5:** No **clip**-in body panels are allowed (Zeus clipped, quick replacement panels). Repaired panels are acceptable but must retain the same thickness as stock.

**4.6.6:** Complete floors must be retained including rear inner fenders.

**4.6.7:** No cutting of floor is allowed with the following exemptions. The center section of the floor is approved for cutting & rising to allow drive train clearance directly over drive train components. This does not include Drivelines, axles or axle shafts. Cutting and re-boxing for the clearance of non-suspension items, including tires, shocks and fuel tank is permitted. No boxing for clearance of springs, air-shocks, or suspension links is allowed.

**4.6.8:** Tubs/cabs may be cut along the bottom (rocker) area of the vehicle, up to, but not including the Floor.

**4.6.9:** The back of the tub/cab may be trimmed horizontally to match the rocker height. A minimum distance of 24" from the center of the axle to the back of the body must be maintained on bobbed vehicles. Bobbed vehicles must retain the original rear corners. Trucks with non-convertible tops must retain the OEM appearance of having a roof. Meaning the body lines of replacement top must follow OEM lines.

**4.6.10:** All items used to replace missing body parts or pieces, must be approved by W.E.ROCK. This includes rocker panels or rocker sections, rear quarter panels, fenders, hoods, etc.

**4.6.11:** All replacement body parts or pieces must be able to remain intact and whole during a competition, any replacement body parts or pieces that fail during competition, will be required to be fixed or replaced if found to be of a lesser strength than the body part or piece it is replacing if found to be a competitive advantage.

**A-** Glass may be removed (recommended). All non-safety glass must be taped completely.

**B-** Doors and tailgates may be removed.

## **4.7: Brakes**

W.E.ROCK considers the brakes to be the source of control for slowing and stopping wheels. The following are the brake guidelines for competition:

**4.7.1:** Mechanically operated brakes are approved.

**4.7.2:** Hydraulic assisted brakes are approved.

**4.7.3:** The brake pedal on the floor must operate all brakes.

**4.7.4:** Competitors may use secondary brakes for operating individual brakes on the vehicle.

**4.7.5:** Transmission brakes are not approved for primary braking. They may be used as a secondary brake or emergency brake.

**4.7.6:** Pinion brakes are not approved, unless OEM on the stated (declared) vehicle. They may be used as a secondary brake or emergency brake.

**4.7.7:** Emergency brake hydraulic locks or mechanical locks are approved for emergency brakes.

**4.7.8:** Emergency brake gears (mechanical type) must be in good shape and not worn to a point of possibly disengagement while under a load.

**4.7.9:** Brakes must be in good working condition with adequate pads. Brakes that are worn out or oil soaked will not pass.

**4.7.10:** Brake lines must be in good shape without leaks and ran in a safe route from cylinders to brakes.

**4.7.11:** Master and slave cylinders must be in good shape without leaks. Adequate braking resistance at the pedal is required.

## **4.8: Bumpers**

W.E.ROCK considers the front bumper to be the foremost part of the frame excluding push bars, stingers, etc. The rear bumper is considered to be the rearmost part of the vehicle.

**4.8.1:** Bumpers must connect the right and left frame rail.

**4.8.2:** Rear bumper may be fitted flush to rear most portion of the body, but the body may not protrude beyond the rear most portion of the bumper.

**4.8.3:** Front bumper may be fitted flush to the front most portion of the body, but the body may not protrude beyond the front most portion of the bumper.

## **4.9: Cooling**

W.E.ROCK considers the following to be part of the cooling system: Radiators, hoses, engine ports, heater hoses, and coolant products.

The following are the cooling guidelines for competition:

**4.9.1:** Air Cooling is approved.

**4.9.2:** Water-cooled systems are approved.

**4.9.3:** Radiator must be in the factory position and covered so that, in the event of a break in the radiator or hoses, spectators, spotters and drivers are protected from the coolant spray and spill.

**4.9.4:** Radiators must be securely mounted.

**4.9.5:** Hoses and connections must be in good condition without cracks, all connections must have a tightening device that utilizes a mechanical means to secure the connection.

**4.9.6:** Top mount (roof mount) radiators are not approved.

**4.9.7:** Radiators must have an OEM or adequate sized aftermarket overflow bottle, securely mounted, and connected to the radiator by an overflow tube. Overflow bottles may not be mounted over or in the passenger compartment. Overflow bottles may not be beverage containers.

**4.9.8:** The use of Ethylene glycol is not permitted.

**4.9.9:** Vent tubes must be attached to an adequate sized fluid containment container.

#### **4.10: Drive shafts**

W.E.ROCK considers the drive shaft to be the working link between the transfer case and the axles. Drive shafts are required.

The following are approved for competition:

**4.10.1:** All mechanical drive shafts.

#### **4.11: Electrical**

W.E.ROCK includes all wires, lights, batteries, and any other items controlled by or conducting electricity as its function to be part of the electrical system.

The following are electrical guidelines for competition:

**4.11.1:** Batteries must be in good shape with adequate mounting to keep the battery in place in the event of a roll.

**4.11.2:** All batteries must be of a non-spill type.

**4.11.3:** Mounting must be a clamp type mount that "cages" the battery in position. Foot-type clamp mounting is not approved.

**4.11.4:** A "Master" kill switch that shuts down every electrical system is required to be mounted on the dash, clearly labeled and in proper working order. This switch must kill the engine when switched to the "off" position.

**4.11.5:** Wires must be in a condition and position that is safe. Exposed or burned wires are not approved.

#### **4.12: Engine**

W.E.ROCK considers the system designed to create torque and horsepower, including blocks, heads, valve cover, oil pan and all internals of such system to be classed as part of the engine.

The following the engine guidelines for competition:

**4.12.1:** All engine sizes and configurations are approved.

**4.12.2:** Engine must be free of leaks.

**4.12.3:** Engine mounts must be in good condition and of adequate material to support the engine.

**4.12.4:** Vent tubes must be attached to a fluid containment container.

**4.12.5:** Dipstick caps must be sealed.

#### **4.13: Fuel System**

The fuel system includes all components and connections used to store, deliver, and mix fuel and air on the vehicle. This includes the type of fuel used.

The following are fuel system guidelines for competition:

**4.13.1:** Carburetors are approved.

**4.13.2:** Fuel Injection systems that either injects fuel from a throttle body or thru ports is approved.

**4.13.3:** Non-vented gas caps are mandatory (Vented gas caps are not approved).

**4.13.4:** Unleaded, leaded, propane, natural gas, and diesel fuels are approved.

**4.13.5:** Alcohol is not approved for competition as a main fuel (see above).

**4.13.6:** Fuel systems must be sealed with a rollover valve installed in the fuel vent line.

**4.13.7:** Ball valves must be installed on all fuel lines including vent lines. Ball valves must be mounted under the vehicle.

**4.13.8:** Fuel lines must be ran from the fuel tank or cell to the engine in a safe route.

**4.13.9:** Fuel lines must be free of leaks or cracks in hoses.

**4.13.10:** Throttle assemblies must be in good order and work smoothly. Throttles that do not

move smoothly throughout their entire range of motion will not pass.

**4.13.11:** Hand throttles are approved but must automatically return to the non-throttle position.

**4.13.12:** Vent tubes must be attached to a fluid containment container.

#### **4.14: Frame**

W.E.ROCK considers the frame of a vehicle to be the two rails supporting the mounting of the body and drive train as the main frame, and connecting cross members as the sub frame.

The following are frame guidelines for competition:

**4.14.1:** All OEM Frames are approved. All frames must meet OEM configuration (dimensions, height, width, length, number and location of cross members) If bobbed, and rear most cross is removed, a bumper must be added and fit the bumper rules.

**4.14.2:** Frame reinforcement is approved.

**4.14.3:** Replacement frames built by commercial manufacturers and available on the market as W.E.ROCK must approve a promoted product.

**4.14.5:** The mainframe must be made of boxed or semi-boxed magnetic steel.

**4.14.6:** No full or partial round tube mainframe rails.

**4.14.7:** No notching of the frame is allowed.

**4.14.8:** Frames may not be shorter than OEM specifications, for the declared vehicle. Measurement will be made along the top edge of the frame (rule 4.8.2 will be taken into consideration when measurements are taken). If there is a dispute on frame length, the owner must state declared vehicle, measurements will be taken and verified before the next event. Penalties will be assessed accordingly.

#### **4.15: Vehicle Numbers**

Vehicle numbers must be displayed on the right, and left sides of the vehicle.

**4.15.1:** Numbers are to be no less than six 6" tall.

**4.15.2:** All numbers are to be the responsibility of the teams. If a team has a number preference, they must ask for that number to be assigned them, before the season starts. Numbers will be issued on a first come first served basis. If a number has been pre-assigned to another competitor, the second competitor will have to change their number. To request a number, the team must be signed up for the W.E.ROCK Series.

W.E.ROCK recommends a detachable number plate be used.

#### **4.16: Roll bars/Cages**

W.E.ROCK considers the cage as the safety bars surrounding the driver. Cages must be designed to protect the occupant in the event of a rollover.

The following are roll bar/cage guidelines for competition:

**4.16.1:** Six (6) point mounting cages covering the driver are required.

**4.16.2:** OEM bars are approved for a portion of the roll cage.

**4.16.3:** Handles are required on the interior portion of the roll-cage or vehicle.

**4.16.4:** Round steel tubing (D.O.M Preferred) 1.5" O.D with 0.120" wall is compulsory for the basic roll cage. Aluminum and/or soft metals are not permitted. Roll bar construction must be welded. A W.E.ROCK official must approve roll cages made of other material or in other wall thickness/diameters.

**4.16.5:** Connection positions of the roll cage must tie in to the frame of the vehicle; Body mounts are considered a tie in point.

**4.16.6:** The front-most position must be no farther toward the rear of the vehicle than fifteen (15) inches behind the throttle and brake pedals.

**4.16.7:** The Cage must have a space no wider than 24" above the driver's head, and at least 1 spreader bar between the front main bar and rear main bar are required unless the cage top is 24" wide or less.

**4.16.8:** Gussets must be welded in the four corners of the "halo". Gussets may be tubing or plate steel.

**4.16.9:** A minimum of .040 magnetic expanded or flat sheet metal, or 1/8" aluminum, must cover the area immediately over the driver seat and be welded or bolted to the roll cage. Steel tubing must surround the roof panel.

**4.16.10:** W.E.ROCK recommends a spreader bar to be mounted under the dash area to connect the right and left “A” pillars.

**4.16.11:** If doors are not ran, a bar running from the “B” pillar, at approximately shoulder height, to the “A” pillar, at approximately shin height, must be ran. This can be a bolt in piece.

**4.16.12:** A “periscope bar” (a bar sticking straight up from the roll cage) is not allowed.

***\*\*\*A cage height minimum of 3” of the from around the entire helmet of the drivers will be the Mandatory set standard for the 2007 season\*\*\****

#### **4.17: Seating**

The following are seating guidelines for competition:

**4.17.1:** Adequately padded headrest or neck support acceptable to W.E.ROCK official inspectors is required.

**4.17.2:** Factory seats must be fastened to the tub in the factory mounting points or to the roll cage.

**4.17.3:** Aftermarket seats must be attached to the roll cage.

**4.17.4:** Mounting points must be in good condition without rust or corrosion.

**4.17.5:** An approved four-point harness is mandatory and must be worn at all times while on an obstacle.

#### **4.18: Steering**

W.E.ROCK considers steering to be all components designed to turn the vehicle wheels to the left or right of the vehicle centerline.

The following are steering guidelines for competition:

**4.18.1:** Steering must be mechanical. Hydraulic ram assisted front steering is permitted.

**4.18.2:** OEM or stock replacement steering systems are allowed.

**4.18.3:** Full Hydraulic steering is not permitted.

**4.18.4:** Brake Steering (See Brakes).

**4.18.5:** All steering components, u-joints, and fittings must be in good working order as determined by a W.E.ROCK official.

**4.18.6:** Hydraulic steering fluids must not leak.

**4.18.7:** Hydraulic lines must be ran in a safe route and be in good shape, free of cracks or fraying as determined by a W.E.ROCK official.

**4.18.8:** Rear steering is not approved for competition in this class.

**4.18.9:** Stock steering configuration must be maintained. Crossover and high steer is allowed.

#### **4.19: Stickers**

**4.19.1:** Teams may run their own stickers without restriction in size.

**4.19.2:** Stickers may not use profanity or be of a crude nature.

**4.19.3:** Contingency stickers must be run in accordance with the contingency sponsor’s program. Contingency stickers are the responsibility of the competitor.

W.E.ROCK will attempt to have every contingency sticker available.

W.E.ROCK will ask that all competitors run the event sponsor stickers, though not required.

#### **4.20: Suspension**

The following are suspension guidelines for competition:

**4.20.1:** Reactive suspension systems are approved.

**4.20.2:** Manual suspension controls are not approved in this class, except for the use of a front or rear winch.

**4.20.3:** Suspension pivot points, connecting points must be free of cracks and in good physical condition as determined by a W.E.ROCK official.

**4.20.4:** OEM wheelbase measurements may be altered plus or minus 3”. Wheelbase may not be changed during or between obstacles.

**4.20.5:** Coils independent of another suspension items (including shocks), must be able to maintain the vehicle ride height.

#### **4.21: Tires**

The following are tire guidelines for competition:

**4.21.1:** All factory built tires from any manufacturer.

**4.21.2:** All automotive-based tires. No agricultural tires are approved.

**4.21.3:** Tire size limit is 35" or the metric equivalent, by sidewall designation. Tire size may be verified by a measurement device and measuring actual diameter on the wheels that will be used for competition with the vehicle on the ground measuring in a horizontal plane at the tire centerline.

**4.21.4:** Vehicles must have no less than no more than or more than four (4) independent tires.

**4.21.5:** Tires are to be the only source of forward, side, or back movement of the vehicle. Any device used to move the vehicle in these directions other than the tires is considered a tool or winch and points will be assessed accordingly.

**4.21.6:** Tire Studs, screws, or anything added to the tire to aid traction will not be permitted

#### **4.22: Transfer Case**

The transfer cases transfers power to the front axle and rear axle of a vehicle.

The following are transfer case guidelines for competition:

**4.22.1:** All mechanical transfer cases are approved.

**4.22.2:** Vent tubes must be attached to a fluid containment container.

#### **4.23: Transmission**

The following are transmission guidelines for competition:

**4.23.1:** All automatic or manually operated transmissions are approved.

**4.23.2:** Vent tubes must be attached to a fluid containment container.

#### **4.24: Wheels**

The following are wheel guidelines for competition:

**4.24.1:** All steel and aluminum wheels are approved.

**4.24.2:** Bead lock wheels with locks on both the inner and outer side of the wheel or any combination thereof is approved.

**4.24.3:** Wheels and bead locks must not interfere with the proper operation of brakes.

**4.24.4:** Wheels must be mounted onto the axle with a minimum of four lug studs.

**4.24.5:** All lug studs must have the proper nuts on them.

#### **4.25: Winches**

The following are winch guidelines for competition:

Winches in working order are required on the vehicle at all times while competing.

**4.25.1:** All professionally built and sold electric, hydraulic, and power take off winches, with a minimum capacity of 6000 pounds on the first wrap of cable, are acceptable.

**4.25.2:** Winches must use rope type cable substitute or cable with minimum burst strength of nine thousand five hundred (9500) pounds (5/16 steel cable).

**4.25.3:** Rope or cable must be in acceptable condition with minimal fraying or kinks.

**4.25.4:** Winch line hooks must be rated at ten thousand (10000) pounds.

**4.25.5:** Winch must be mounted using all factory-mounting positions on either the bottom or front and back.

**4.25.6:** All vehicles must carry an approved winch bag (if using wire cable).

**4.25.7:** Winch line hooks must have an attached strap, at least four inches in length.

**4.25.8:** Must be in working order and able to use (not tied to the axle) during the event in the case of an emergency or self extraction help

#### **4.26: Window Nets**

**4.26.1:** Safety nets are mandatory on all vehicles competing and must cover the complete open area of the driver's side.

- 4.26.2.:** Window Nets should be tight, so that no occupant should push the net out more than 4 inches (4 inches is what was recommended from DJ Safety, Simpson, Impact, and Crow)
- 4.26.3:** Window nets should cover the entire main window area. Moreover that if a limb can come out in any way, the area must be netted.
- 4.26.4:** Separation between the net and the cage may not be any greater than 2 inches at any point throughout the entirety of the design.
- 4.26.5:** Nets must be secured by a positive locking mechanism and shall be installed so that the driver can release the netting and exit the vehicle unassisted regardless of vehicle position.
- 4.26.6:** Netting must be installed on the inside of the roll cage bars so that it will not be damaged or come off the vehicle in the event of a roll-over or slide on the side.
- 4.26.7:** The net's border or edge and mounting materials must be made of materials that are as strong as or stronger than the netting itself.
- 4.26.8:** "Zip tie", plastic fastener, or "Velcro" systems are not permitted. Acceptable methods of tying the nets into the vehicle include: Hose Clamps, metal hooks, snaps and steel rods.
- 4.26.9:** Arm restraints will be allowed but must be in addition to the required safety nets.
- 4.26.10:** Vehicles with "Wing Areas" (the area between the A pillar and A pillar support bar) may keep the area open without netting unless reachable for the occupant while harnessed inside of vehicle.