NORRA LEGACY

WORLD CHAMPIONSHIP SERIES

2027

CLASSIC

VEHICLE RULES & REGULATIONS

PIONEER ERA (1967 – 1982)
VINTAGE ERA (1983 – 2000)



2027 Classic Vehicle Rules

Version 1.0

1 Safety Equipment

1.1 Helmets and Frontal Head Restraints

All drivers, codrivers and any additional vehicle occupants must wear full-face Helmets that meet at least one of the following standards: Snell memorial foundation SA2015, SA2020 or SA2025 with a legible Snell sticker attached, SFI Standard 31.1/2015, 31.1/2020 or 31.1/2025, FIA Standard 8860-2018, 8860-2018 ABP, 8860-2010, 8859-2024, 8859-2024 ABP and 8859-2015 with a legible FIA sticker attached. Straps must have D-ring fasteners only. No snaps or Velcro will be permitted. The interior and exterior areas of the helmet must be free of defects (i.e., the padding must be in good condition, and the exterior of the helmet must not be damaged). Helmets must be always worn during Special Stages and Transit Stages.

Open-Face helmet exception they are only allowed in vehicles are equipped with a windshield.

All 2015 helmets must be in good condition and must be approved by the Chief Scrutineer.

All drivers, codrivers and any additional vehicle occupants must wear a Frontal Head Restraint (FHR) compliant with the SFI Foundation Spec 38.1 or FIA 8858-2018 or 8858-2010 Standards. The FHR device must be used with a compatible helmet that has pre-installed FHR fixation points (M6 threaded inserts), which all Snell SA2015/SA2020/SA2025 and all FIA homologated helmets have.

1.2 Protective Clothing

SFI 3.2A/1 or greater /5, /10 or FIA 8856-2018 or 8856-2000 certified fire suits are mandatory for all categories and must be worn during Special Stages and Transit Stages. Two-piece suits are not permitted. The suits must cover from the neck to the ankles and to the wrists. The suits must not have any holes, rips, and tears or be worn thin. The suits must also be free from any petroleum-based contaminants. All suits must be made from fire-resistant material with the manufacturer's fire-resistant rating label attached. SFI 3.3/5 or greater /10, /20 or FIA 8856-2018 or 8856-2000 certified racing gloves are mandatory for all categories and must be worn during Special Stages and Transit Stages.

1.3 Eye Protection

Shatter resistant eye protection is required for all entrants.

1.4 First Aid Kit

A weatherproof first aid kit must be always carried in each vehicle and must contain at least the following items:

2	4" Bandage Compress	2	2" Bandage Compress
1	Triangular Bandage	8	2" x 3" Adhesive Bandages
4	1" x 3.375" Adhesive Bandages	4	Antiseptic (Methylate, etc.)
1	Eye Dressing Packet	1	Ace Bandage

The first aid kit must be easily accessible within the occupant's area without having to remove any body panels or equipment.

1.5 Emergency Warning Devices

Four-wheel vehicles are required to carry at least two fifteen-minute flares for emergency signaling and warning or two electronic visual distress signaling devices (eVDSD) These battery-operated LED lights flash the international Morse Code SOS signal and can last for hours, compared to the minutes of a traditional flare.

1.6 Horns

All vehicles must have a horn that is audible from 100 feet in front of the vehicle. Sirens are permitted during Special stages but are not to be used on the highway nor during transit sections.

1.7 Rear Facing Light and Reflectors

All vehicles must have a rear-facing deep colored amber light, the light must be at least 3 inches in diameter if round, visible 180 degrees from the rear and mounted a minimum of 48 inches off the ground. Amber light must be wired to battery cut off switch or battery on. Vehicles may not be allowed to start a Special stage unless the amber light is operational.

Additionally, must have two red reflectors of at least 2” diameter each if round (DOT stock taillight lenses satisfy this requirement) attached to the rearmost portion of vehicle at each corner or reflective tape or reflectors that must be clearly visible from the rear. LED lights are non-reflective and do not meet this requirement.

1.8 Fire Extinguisher

Each four-wheel vehicle must carry two (2) portable UL approved 2.5-lb. ABC-class dry chemical type fire extinguishers one located inside of the driver compartment and another one in the exterior of the vehicle. Halon type fire extinguishers do not meet this requirement as Halon is readily dispersed in wind.

Fire extinguishers must have a capacity gauge, be fully charged, and readily accessible. An on-board fire suppression system (with discharge nozzles in the passenger compartment, the engine compartment and the fuel storage area) is optional in addition to the portable fire extinguishers.

1.9 Survival Supplies

All vehicles must carry at least one day of survival supplies and one quart of water per occupant. It is highly recommended that additional water be carried for each occupant during the hotter months.

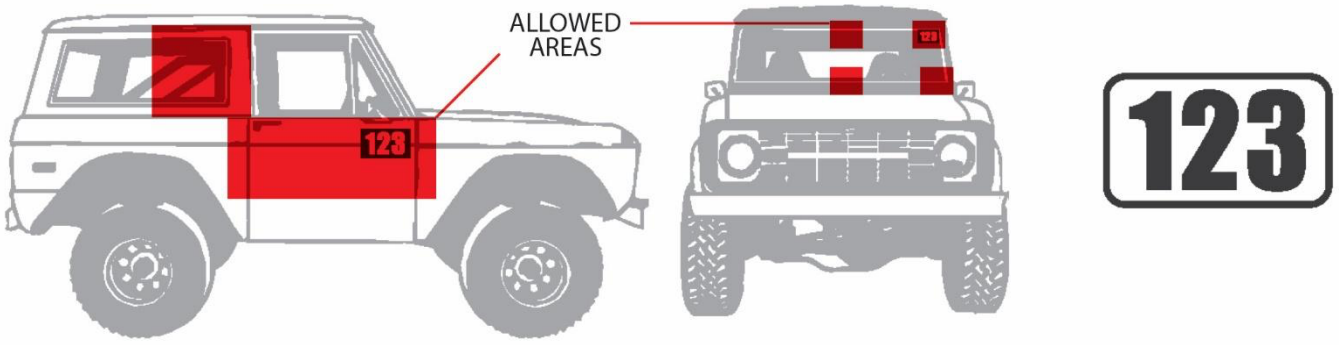
1.10 Race Vehicle Numbers

Teams must supply their own number stickers per the following rules.

All race numbers are to be on a rectangular area of contrasting solid background color such as black on white or white on black. The front numbers shall be a 3.5” tall. The rear and side numbers shall be 5” tall. In front a simple black on white with block letters is required to facilitate rapid sorting in staging each day.

If a vehicle does not have a flat surface facing forward or rearward, then the competitor is required to have a plastic or metal plate attached to the car, so they have a place to attach the required stickers. The front sticker must be as close to vertical as possible but should not be angled back more than 30 degrees such that it is quickly visible and readable by the staging crews. The front number must be in one of the 4 corners of the driver’s side of the windshield or front opening (not on the passenger side). For example, on the drivers A-pillar at the top or bottom or in the windshield/opening center at the top or bottom. But not on the passenger A-pillar.

NORRA cannot guarantee there will be someone available at tech to print numbers so please have this taken care of prior to arrival at the event.



2 Workmanship

All construction, modifications and alterations must be performed in a workmanlike manner and meet with the rules, regulations and approval of NORRA.

2.1 Communication Equipment

Primary Communication System – Starlink

Starlink satellite internet is the preferred primary communication system for NORRA competitors, providing connectivity for voice calls, messaging, and direct communication with NORRA Race Operations throughout the event.

Secondary and Backup Communication Systems

VHF radios are considered secondary communication equipment. Competitors are encouraged to carry a VHF radio capable of transmitting and receiving on the official NORRA frequency of 151.625 MHz, commonly known as the Weatherman frequency.

Additional backup communication devices, including Garmin inReach, SPOT devices with two-way messaging capabilities, and satellite phones, are also recommended.

All competitors must maintain a reliable means of communication with NORRA Race Operations throughout the event. Communication equipment must be properly installed, powered, and operational.

Radio equipment must not interfere with official event communications or other authorized frequencies. Outboard linear amplifiers with an output exceeding 25 watts are prohibited.

The official NORRA Race Operations contact number, and communication procedures will be published in the Race Information prior to the event.

2.2 GPS Tracking Devices

All vehicles in competition are required to use the NORRA-approved Stella GPS tracking and safety system. The Stella 7 will serve as the primary tracking and communication device, operating in conjunction with the Stella EVO as a backup system.

The previously used SPICA device will no longer be utilized.

Competitors must purchase and install the required mounting kits, wiring, and antennas prior to the event. Both Stella devices will be installed and tested during Technical Inspection.

The Stella system provides GPS position tracking and data logging to verify course compliance, speed restrictions, and checkpoint validation. It also provides safety functions, including stopped vehicle warnings, overtaking requests, and emergency communications with NORRA Race Operations.

Starlink satellite internet connectivity is required for the proper operation and communication capabilities of the Stella 7 system. Competitors must ensure that their Starlink equipment is properly installed, powered, and operational throughout the event.

The Stella EVO will serve as a backup tracking and safety device in the event of a Stella 7 malfunction or communication failure. Competitors are responsible for maintaining their tracking and communication equipment in proper working condition throughout the event.

2.3 Navigation

NORRA racecourses are not physically marked. Course details are released shortly before each stage to prevent competitors from pre-running the exact route. A digital roadbook is provided to all competitors each morning through the Stella 7 system. Additionally, GPS tracks are provided in .GPX format, compatible with most GPS navigation devices.

Two GPS files will be released: one containing waypoint numbers corresponding to the notes in the official roadbook, and another containing the complete roadbook notes, including navigation information compatible with the LeadNav and DirtOS applications, where supported.

The official roadbook contains detailed route instructions, graphic indications, hazards, speed zones, and Virtual Checkpoints (VCPs). These VCPs will also be included in the GPS files and will be used to verify course compliance. The official roadbook is the primary and authoritative source of navigation information. In the event of any discrepancy or conflicting information between the official roadbook, GPS files, navigation applications, or tracking systems, the official roadbook shall take precedence and be considered the final authority. Competitors are responsible for navigating the designated route, complying with all speed restrictions, and passing through the required Virtual Checkpoints (VCPs). Failure to follow the official course, comply with speed restrictions, or successfully validate the required VCPs may result in penalties in accordance with NORRA regulations.

2.4 Vehicle Refueling

All vehicles may only be refueled using approved vented fuel cans, gravity-fed fuel towers, or fuel transfer pumps. Refueling must only be performed while the vehicle is completely stationary, with the engine turned off. Fuel storage tanks and refueling equipment must be positioned at least 20 feet from the racecourse and at least 10 feet from race vehicles, except for equipment actively being used during refueling operations. All gravity-fed fuel towers must be equipped with a spring-loaded dead-man valve that automatically stops fuel flow when released. Refueling hoses must incorporate a breakaway safety feature to minimize fuel spills in the event a vehicle moves while the hose remains connected. All personnel directly involved in refueling operations must wear appropriate fire-resistant personal protective equipment (PPE), including a fire-resistant suit, helmet, gloves, protective footwear, fire-resistant underwear, and a protective apron. All equipment must be in good condition and properly worn throughout the refueling operation.

Each refueling pit must have a minimum of three (3) fully charged 20 lb ABC-rated fire extinguishers positioned within 6 feet of the refueling operation. Designated fire safety personnel must remain in attendance and be prepared to respond immediately throughout the refueling process.

Smoking, open flames, and other ignition sources are strictly prohibited within the refueling area. Fuel spills must be contained and cleaned up immediately, and refueling operations must be suspended until the area is safe. NORRA reserves the right to inspect, restrict, or prohibit any refueling equipment, installation, or procedure deemed unsafe by race officials. Failure to comply with these requirements may result in suspension of refueling operations or penalties under NORRA regulations.

These requirements do not apply to vehicles refueling at established commercial gas stations, where applicable station safety procedures and regulations must be followed.

2.5 Driver’s License, Passport and Mexican Immigration Requirements

All competitors must carry a valid government-issued driver's license and official photo identification throughout the event. Foreign nationals entering Mexico must comply with all applicable Mexican immigration requirements. U.S. citizens entering Mexico by land must carry a valid U.S. Passport Book or Passport Card and obtain a Forma Migratoria Múltiple (FMM) or other applicable immigration authorization when required. Foreign competitors and crew members should be aware that immigration documentation, including the FMM, may be requested at military, immigration, or other authorized checkpoints along highways throughout Baja California and Baja California Sur. All foreign participants must carry proof of their legal immigration status in Mexico, including a valid FMM or applicable residency documentation, and be prepared to present it when requested by authorized Mexican authorities.

The FMM may be obtained through the official Mexican National Immigration Institute (INM) website at www.inm.gob.mx or at an authorized immigration office at the port of entry. A valid U.S. Passport Book is strongly recommended, as a Passport Card cannot be used for international air travel, including emergency medical evacuation flights to the United States. NORRA does not routinely verify passports, FMM permits, or immigration documents. However, all competitors and team members are individually responsible for maintaining valid immigration documentation throughout the event.

Failure to present the required documents at an authorized checkpoint may result in delays or other actions by Mexican authorities. NORRA is not responsible for delays or consequences resulting from a participant's failure to comply with Mexican immigration requirements.

3 Vehicle Rules

3.1 Suspension Components

3.1.1 Shock Absorbers

All vehicles must have at least one fully functional shock absorber per wheel at the start of the event. Shock absorbers must remain in safe operating condition throughout the competition. External reservoirs and water-cooled shock absorbers are permitted unless specifically prohibited by individual category rules.

Air shocks and hydraulic air bump stops are permitted unless specifically prohibited by individual category rules.

All shock absorbers, including air shocks and air bump stops, must comply with the maximum diameter and design restrictions established for their respective Era and category. Pioneer Era vehicles are limited to a maximum shock diameter of 2 inches (OD). Coilover and bypass shock absorbers, whether internal or external, are prohibited.

Vintage Era vehicles may use modern shock absorber technology, including coilovers, bypass shocks, and external reservoirs, subject to any restrictions specified in their individual category rules. In the event of any discrepancy between these general requirements and the specific shock absorber regulations of a category, the category-specific rules shall take precedence.

3.1.2 Wheels and Tires

Snap-on hubcaps and snap-on wheel covers of any type are prohibited.

All wheels and tires must be in safe operating condition, free from visible damage, excessive wear, or defects that could compromise vehicle safety.

Tires must be properly mounted, inflated, and suitable for off-road racing conditions. Wheels must be securely fastened, with no missing or damaged lug nuts or studs. NORRA reserves the right to inspect wheels and tires during Technical Inspection or at any time during the event and may prohibit any vehicle from competing until unsafe conditions have been corrected.

Maximum tire diameter and any wheel restrictions must comply with the specific requirements established for each vehicle's Era and category.

3.1.3 Fasteners

All suspension, chassis, steering, and drivetrain components must be secured using SAE Grade 8 or higher-strength fasteners, or equivalent metric fasteners of property class 10.9 or higher, appropriate for their intended application.

All critical fasteners must be properly tightened and secured against loosening using suitable locking methods, including prevailing-torque locknuts, cotter pins, safety wire, or approved locking devices. Bolts secured with nuts must have at least one full thread extending beyond the nut, unless otherwise specified by the component manufacturer.

All fasteners must be in good condition, free from excessive corrosion, damage, or stripped threads. Missing, loose, or improperly secured fasteners must be replaced or corrected before the vehicle is permitted to compete. NORRA reserves the right to inspect critical fasteners during Technical Inspection or at any time throughout the event.

3.2 Hoses

All fuel and brake lines, including flexible hoses, rigid metal tubing, and fittings, must be properly secured and maintained in safe operating condition.

Flexible hoses must be routed and supported to prevent chafing, kinking, excessive vibration, or contact with sharp edges, moving components, and high-temperature surfaces. All hose connections must use appropriate fittings, clamps, or other approved retention methods suitable for the operating pressure and application. Safety wire must be used where required by the fitting design or manufacturer.

Fuel and brake lines must be free from leaks, cracks, corrosion, and visible damage. Any damaged, leaking, or improperly secured lines must be repaired or replaced before the vehicle is permitted to compete. NORRA reserves the right to inspect all fuel and brake lines during Technical Inspection or at any time throughout the event.

3.3 Steering and Brake Components

3.3.1 Steering

All steering components, including steering boxes, racks, shafts, tie rods, drag links, ball joints, rod ends, and associated mounting hardware, must be in good condition, properly secured, and fully operational. Steering systems must be free from excessive play, binding, cracks, damage, or other defects that could compromise vehicle control or safety.

All steering linkage connections must be secured using appropriate locking methods. OEM tie rod ends and drag links equipped with castellated nuts must be secured with cotter pins. Aftermarket steering components must use approved locking hardware appropriate for their design and application. Steering components and linkages must have adequate clearance throughout the full range of steering and suspension travel, without interference with other vehicle components.

Any damaged, loose, or improperly secured steering components must be repaired or replaced before the vehicle is permitted to compete.

NORRA reserves the right to inspect steering systems during Technical Inspection or at any time throughout the event.

3.3.2 Brakes

All vehicles must be equipped with a fully functional braking system capable of providing adequate stopping power and maintaining safe vehicle control under racing conditions.

The braking system must be capable of applying sufficient force to lock all wheels under appropriate traction conditions. Front and rear brakes must operate properly and provide balanced braking performance. All brake components, including master cylinders, calipers, wheel cylinders, brake lines, hoses, fittings, rotors, drums, and associated hardware, must be in good condition, properly secured, and free from leaks, cracks, excessive wear, or damage.

Brake pedals must operate smoothly, maintain consistent hydraulic pressure, and provide adequate pedal travel without excessive movement or loss of braking performance.

All vehicles must maintain a safe and fully operational braking system throughout the event. Any brake system malfunction, fluid leak, or other condition that compromises braking performance must be repaired before the vehicle is permitted to continue in competition.

NORRA reserves the right to inspect and test braking systems during Technical Inspection or at any time throughout the event.

3.4 Electrical System

3.4.1 Ignition

All vehicles must be equipped with a properly functioning ignition on/off switch capable of immediately shutting down the engine. The ignition switch must be clearly labeled and readily accessible to the driver while seated and secured by the safety harness.

An externally accessible engine shutoff switch must also be provided for emergency use by rescue personnel, unless otherwise approved by NORRA Technical Inspection. The external switch must be clearly identified and located in an easily accessible position.

All electric fuel pumps must automatically stop operating when the engine is shut off or the ignition is switched off. Vehicles equipped with independently operated electric fuel pump switches must have these switches clearly labeled "FUEL ON/OFF" and accessible to the driver and emergency personnel. Independent fuel pump switches are discouraged unless equipped with appropriate safety provisions to prevent unintended fuel delivery after an engine shutdown or accident.

OEM keyed ignition switches are permitted, provided they are in proper working condition and comply with the applicable emergency shutoff requirements.

All ignition and fuel pump electrical connections must be properly secured, protected against short circuits, and maintained in safe operating condition throughout the event.

NORRA reserves the right to inspect and test ignition and engine shutoff systems during Technical Inspection or at any time throughout the event.

3.4.2 Batteries

Conventional flooded lead-acid (wet-cell) batteries are prohibited. Only sealed AGM (Absorbed Glass Mat) and Lithium Iron Phosphate (LiFePO4) batteries are permitted.

All batteries must be securely mounted using metal brackets or metal-to-metal retaining systems capable of preventing movement during competition, including impacts and rollovers. Plastic straps, rubber cords, or other nonmetallic retaining devices may not be used as the primary battery restraint.

Battery terminals and electrical connections must be properly secured and protected against accidental short circuits. Batteries must be installed away from excessive heat, fuel lines, and other potential hazards. Lithium Iron Phosphate (LiFePO4) batteries must incorporate an appropriate Battery Management System (BMS) to protect against overcharging, over-discharging, overheating, and short circuits.

Vehicles equipped with LiFePO4 batteries must carry an additional fire extinguisher specifically rated or approved by its manufacturer for the type of battery installed, subject to NORRA Technical Inspection approval.

This extinguisher must be securely mounted and readily accessible, in addition to the standard fire extinguishers required by NORRA.

All batteries and associated electrical systems must remain in safe operating condition throughout the event.

NORRA reserves the right to reject any battery installation deemed unsafe.

3.4.3 Lights

All vehicles must be equipped with fully functional forward-facing headlights, taillights, brake lights, and at least one rear-facing amber safety light.

Unless the original factory mounting locations are used on production-based vehicles, taillights and brake lights must be mounted at least 36 inches above the ground.

Brake lights must have a minimum diameter of 3 inches or an illuminated surface area of at least 7 square inches. OEM brake lights on production-based vehicles are exempt from these minimum size requirements.

The rear-facing amber safety light must comply with the specifications established in the Rear-Facing Light and Reflectors section of these regulations.

All required lights must be securely mounted, clearly visible, and maintained in proper working condition throughout the event. Brake lights must illuminate automatically when the service brakes are applied. Vehicles with missing, damaged, or inoperative required lighting may be prohibited from starting or continuing a Special Stage until the condition has been corrected.

NORRA reserves the right to inspect and test all required lighting equipment during Technical Inspection or at any time throughout the event.

3.4.4 Starter

All vehicles must be equipped with a fully functional onboard electric starter capable of starting the engine without external assistance.

The starter system, battery, wiring, and associated electrical components must be properly installed, securely mounted, and maintained in safe operating condition throughout the event.

NORRA reserves the right to inspect and test the starting system during Technical Inspection or at any time during the event.

3.5 Vehicle Safety Equipment

3.5.1 Roll Cages

All vehicles participating in NORRA competition must be equipped with a properly constructed and securely mounted roll cage designed to protect occupants in the event of a rollover or impact.

Each competitor is responsible for presenting a safe vehicle at Technical Inspection and for maintaining the structural integrity of the roll cage throughout the event. NORRA reserves the right to reject any roll cage design, construction, modification, or repair deemed unsafe by the Chief Scrutineer or designated Technical Inspector.

Historical Vehicle Exception

NORRA recognizes the historical significance of authentic Pioneer and Vintage Era race vehicles. Original race vehicles with documented competition history may retain period-correct roll cage designs and tubing dimensions as originally constructed and used in competition, subject to Technical Inspection approval.

This exception applies only to authentic historical vehicles and does not automatically extend to replicas, tribute vehicles, or newly constructed vehicles.

Roll Cage Materials and Tubing Requirements

All newly constructed roll cages must use suitable seamless steel tubing, including mild carbon steel, DOM (Drawn Over Mandrel), or SAE 4130 chromoly steel. Aluminum and other non-ferrous materials are prohibited.

The following tubing dimensions represent the minimum recommended sizes based on vehicle weight:

Vehicle Weight — Minimum Tubing Size

Under 2,000 lbs. — 1.50" × 0.095"

2,001–2,500 lbs. — 1.50" × 0.120"

2,501–3,000 lbs. — 1.75" × 0.095"

3,001–4,000 lbs. — 1.75" × 0.120"

4,001 lbs. and over — 2.00" × 0.120"

Equivalent alloy steel tubing dimensions may be accepted when supported by manufacturer specifications demonstrating comparable structural strength and approved by NORRA Technical Inspection. All welding must demonstrate proper penetration, sound workmanship, and freedom from cracks, porosity, or significant undercutting. Oxy-acetylene brazing of roll cage structural components is prohibited.

Roll Cage Design

Roll cages must incorporate a front vertical hoop, rear vertical hoop, two upper longitudinal connecting bars, two rear down braces, at least one diagonal brace, and appropriate structural gussets. The two upper connecting bars must be positioned as far outward as practical along the upper sections of the front and rear hoops.

Rear down braces and diagonal braces should be installed at an angle of at least 30 degrees from vertical. A crossmember of tubing equivalent to the main hoop must be installed at the lower attachment point of the diagonal brace.

A minimum clearance of 3 inches should be maintained between occupants' helmets and roll cage tubing when occupants are seated in their normal driving positions with their safety harnesses properly fastened.

All roll cage components that could come into contact with an occupant's helmet must be covered with appropriate impact-resistant roll cage padding.

Roll Cage Mounting

Roll cages must be securely attached to structural frame or body members capable of withstanding rollover and impact loads.

Cab-mounted or body-mounted roll cages must use reinforcement plates at mounting points. A minimum of two 0.1875-inch-thick steel doubler plates, one on each side of the body structure, must be used where applicable. Mounting bolts must be at least 0.375 inches in diameter and SAE Grade 8 or equivalent strength. Welding roll cages directly to unsupported sheet-metal body structures is strongly discouraged.

Roll cage mounting points must be designed to prevent structural failure, shearing, or movement exceeding 1.5 inches under impact loading.

Side Impact Protection

All vehicles, including those equipped with factory steel doors, must have at least one structural side-impact protection bar on each side of the occupant compartment.

Side-impact bars must use tubing of equivalent material and dimensions to the main roll cage structure and must be securely welded to the front and rear hoops.

Side bars should be positioned as close to parallel with the ground as practical while providing maximum occupant protection without obstructing emergency entry or exit.

Structural Gussets

All major roll cage intersections, including diagonal braces, rear down braces, and side-impact bars, must be adequately reinforced with structural gussets where required.

Acceptable gussets include 0.125-inch-thick steel plates measuring approximately 3 inches by 3 inches, formed corner gussets, or tubing gussets of equivalent material and structural strength.

Gussets must be installed wherever failure of a single welded joint could compromise occupant protection.

All roll cage designs, materials, mounting methods, and structural modifications remain subject to approval by NORRA Technical Inspection.

3.5.2 Safety Harness

All vehicles must be equipped with a minimum five-point racing safety harness for each occupant, including lap belts, two independent shoulder straps, and an anti-submarine strap. Harnesses must incorporate a metal-to-metal quick-release locking mechanism. Push-button release systems and Y-type shoulder harnesses are prohibited.

Safety Harness Certification Requirements

Safety harnesses must meet one of the following certification standards:

SFI 16.1: Harnesses must have 3-inch-wide lap belts, 3-inch-wide shoulder straps, and a minimum 2-inch-wide anti-submarine strap.

SFI 16.5: Harnesses with 2-inch-wide lap belts and 2-inch-wide shoulder straps are permitted when certified under this standard.

Two-inch-wide lap and shoulder belts certified only under SFI 16.1 are not permitted.

All harnesses must be manufactured from approved high-strength nylon or polyester webbing and must remain in excellent condition, free from cuts, fraying, abrasions, chemical contamination, excessive wear, or deterioration.

Each harness must display the manufacturer's identification, applicable SFI certification, and date of manufacture or expiration date. Harnesses must be within two (2) years of their date of manufacture, or within the expiration date established by the applicable certification and accepted by NORRA. All certification and expiration labels must be legible. Expired harnesses are prohibited.

All harness components, including webbing, buckles, adjusters, attachment hardware, and mounting brackets, must remain in their original manufacturer-approved configuration. Modifications, repairs, or alterations not authorized by the manufacturer are prohibited.

Harness Installation and Mounting

All safety harnesses must be securely attached to properly reinforced structural members of the vehicle chassis or roll cage. Mounting points must be capable of withstanding the forces generated during an accident.

Shoulder straps must be mounted behind the occupant's seat at angles and locations consistent with the harness and seat manufacturer's installation requirements. Shoulder straps must not be routed over sharp edges or installed in a manner that could compromise occupant restraint.

Lap belts must be mounted to properly reinforced structural points and positioned to restrain the occupant's pelvis securely. Anti-submarine straps must be mounted according to the manufacturer's specifications to prevent upward movement of the lap belts during an impact.

Harness mounting hardware must use a minimum of 5/16-inch (0.3125-inch) SAE Grade 8 bolts or manufacturer-approved equivalent hardware. Mounting points must be reinforced using appropriate structural brackets or backing plates where required.

All mounting bolts, nuts, and attachment hardware must be properly secured against loosening. Clip-in harness attachments must incorporate appropriate retaining clips, cotter pins, or safety wire as specified by the manufacturer.

Harness adjustment buckles must remain accessible and positioned to prevent accidental loosening, interference, or chafing against the seat or occupant.

All occupants must wear their safety harnesses properly fastened and adjusted whenever the vehicle is moving during Special Stages and Transit Stages.

NORRA reserves the right to inspect and reject any harness system, installation, or mounting arrangement deemed unsafe or noncompliant during Technical Inspection or at any time throughout the event.

3.5.3 Safety Nets and Vehicle Roof

All vehicles must be equipped with properly installed safety window nets on both sides of the occupant compartment. Safety nets are mandatory for all Pioneer and Vintage Era vehicles and must cover the entire open area of the cockpit to prevent occupants' arms or other body parts from extending outside the vehicle during a rollover or collision.

Window nets must be constructed from durable polyester or nylon materials and may be either webbing or mesh type. Webbing nets must use material at least 1.0 inch wide and 0.043 inch thick, with openings not exceeding 2.0 inches. Mesh-type nets must incorporate reinforcing webbing at least 1.0 inch wide and 0.043 inch thick at intervals not exceeding 12 inches.

Safety nets must be installed on the inside of the roll cage to protect them from damage or detachment during a rollover or side impact. Nets attached to door frames are permitted only when the doors are equipped with a positive secondary latching mechanism.

All safety nets must be securely mounted while allowing occupants to release them quickly and exit the vehicle without assistance, regardless of the vehicle's position.

Safety Net Mounting and Release Mechanisms

The net borders, mounting hardware, and attachment points must be of equal or greater strength than the net material itself. Attachment points must be spaced no more than 6 inches apart along the upper and lower edges of the net.

Acceptable attachment methods may include steel rods, metal hooks, heavy-duty clamps, or other secure mounting systems approved by NORRA Technical Inspection.

Where steel rod mounting systems are used, rods must be constructed from solid steel with a minimum diameter of 1/2 inch. The upper rod must extend at least 1 inch through the rear mounting tab. Fixed upper rods that prevent rapid removal or release of the net are prohibited.

All window net mounting brackets must be securely welded to the roll cage. When closed, the net must remain properly tensioned and secured by a positive locking mechanism.

Safety nets must incorporate a quick-release latch that can be operated by the occupant without tools or outside assistance. Push-button release latches are prohibited. All release mechanisms and mounting arrangements are subject to approval by NORRA Technical Inspection.

Vehicle Roof Protection

All vehicles must be equipped with a securely mounted protective roof covering the occupant compartment.

The roof must be constructed from one of the following materials and minimum thicknesses:

Steel sheet metal: 0.060 inch minimum.

Aluminum sheet: 0.090 inch minimum.

UHMW polyethylene: 0.250 inch minimum.

Fiberglass or other composite roof panels are permitted only when reinforced with an underlying metal roof that meets the minimum thickness requirements.

Roof panels must be securely attached to the roll cage or appropriate structural members and must provide adequate protection against debris, impact, and occupant exposure during a rollover.

The roof, safety nets, and surrounding occupant protection structures must prevent occupants from extending outside the protective boundaries of the vehicle during a rollover or collision.

NORRA reserves the right to inspect and reject any safety net, mounting system, release mechanism, or roof construction deemed unsafe or noncompliant during Technical Inspection or at any time throughout the event.

3.5.4 Seating

All vehicles must be equipped with purpose-built racing seats manufactured by a recognized company specializing in motorsports safety equipment. Seats must provide adequate support and protection for occupants during off-road competition.

Reclining seats, low-back seats, and standard production vehicle seats are prohibited unless specifically permitted by individual category rules. All racing seats must incorporate appropriate head, back, and lateral support and be compatible with the required safety harness system.

Seat Installation and Mounting

All seats must be securely mounted to the vehicle chassis, roll cage structure, or properly reinforced structural mounting points. Seat mounting systems must be designed to prevent movement, separation, or structural failure during competition or in the event of an impact or rollover.

All mounting brackets, bolts, and reinforcing components must be appropriate for the seat design and installed according to the seat manufacturer's recommendations.

Adjustable seat tracks are permitted provided they incorporate positive locking mechanisms and are securely mounted to prevent unintended lateral, vertical, or longitudinal movement.

Original VW-type seat runners must be secured to the floor using a minimum of two 0.375-inch-diameter U-bolts per rail, with flat washers measuring at least 1 inch in diameter installed on the underside.

Occupant Protection and Clearance

Seats must be positioned to provide adequate clearance between occupants' helmets and the roll cage, roof, and surrounding structural components.

All roll cage tubing, braces, or structural components that could come into contact with an occupant's helmet must be covered with appropriate impact-resistant roll cage padding.

Seats must allow occupants to properly fasten and adjust their safety harnesses and must not interfere with emergency entry or exit from the vehicle.

All seats, mounting hardware, and adjustment mechanisms must remain in safe operating condition throughout the event.

NORRA reserves the right to inspect and reject any seat, mounting system, or installation deemed unsafe or noncompliant during Technical Inspection or at any time throughout the event.

3.6 Fuel System

3.6.1 Fuel

All vehicles competing in the Pioneer and Vintage Eras must use commercially available fuels appropriate for their engine and fuel system. The following fuels are permitted, unless otherwise restricted by individual category rules:

a) Commercially available pump gasoline.

b) Commercially manufactured racing gasoline.

c) Commercially available diesel fuel.

Fuel Restrictions and Additives

Methanol, E85, E100, nitromethane, aviation gasoline (Avgas), and other specially formulated oxygenated racing fuels are prohibited. Ethanol present in commercially available pump gasoline is permitted.

Commercially manufactured fuel additives are permitted, provided they are used according to the manufacturer's instructions and do not introduce prohibited fuel components.

All fuels must be compatible with the vehicle's engine, fuel delivery system, and fuel storage components.

NORRA reserves the right to inspect or test fuel samples and prohibit the use of any fuel or additive that violates these regulations or presents an unacceptable safety risk.

3.6.2 Fuel Tanks

All vehicles competing in the Pioneer and Vintage Eras must be equipped with approved safety fuel cells unless otherwise permitted by individual category rules or the Historical Vehicle Exception described below.

Auxiliary fuel tanks are permitted but must meet the same safety fuel cell requirements as the primary fuel tank. All fuel tanks must be securely mounted to the vehicle's chassis or properly reinforced structural members.

Removable fuel containers, including GI cans, RotoPax, or similar portable fuel storage containers, are prohibited inside or attached to competition vehicles during the event.

Safety Fuel Cell Construction

Safety fuel cells must consist of a fuel-resistant bladder enclosed within a securely mounted protective container.

The outer container must be constructed from one of the following materials:

a) Steel: Minimum 20-gauge thickness.

b) Aluminum: Minimum 0.060-inch thickness.

c) Marlex polyethylene: Minimum 0.125-inch thickness.

Magnesium containers are strictly prohibited.

Fuel cell containers must be securely attached using appropriate bolts, steel straps, or manufacturer-approved mounting systems capable of preventing movement or separation during competition, impacts, or rollovers.

All fuel cell fittings must be properly secured and sealed to prevent fuel leakage. Internal baffling is mandatory to minimize fuel movement during competition.

Fuel bladders must be constructed from nylon or Dacron woven fabric impregnated and coated with a fuel-resistant elastomer, or an approved equivalent material meeting the required safety standards.

The minimum physical properties of fuel cell bladders must comply with the following specifications:

Test Type	Minimum Standard	Test Specification
Tensile Strength	450 lbs.	CCC-T-1916, Method 5102
Tear Strength	50 lbs.	CC-T-1916, Method 5134
Puncture Resistance	175 lbs.	MIL-T-6396, Article 4.5.17

These requirements apply to all areas of the bladder, including seams, joints, and fittings.

Fuel Tank Installation and Protection

All fuel tanks must be securely mounted and adequately protected against impact, puncture, and damage from surrounding vehicle components.

Fuel filler openings and ventilation systems must be routed to the exterior of the occupant compartment. Appropriate rollover valves must be installed to prevent fuel leakage if the vehicle overturns.

A substantial structural crossmember and a protective firewall must separate the fuel tank from the occupant compartment.

Fuel tanks must not be exposed to excessive heat, exhaust components, or other potential ignition sources.

Historical Vehicle Exception – Pioneer Era

Authentic Pioneer Era vehicles that competed in NORRA events prior to 1973 may retain their original fuel tank configuration without a modern safety fuel cell, unless otherwise required by individual category rules.

This exception applies only to vehicles with documented historical competition records and is subject to approval by NORRA Technical Inspection.

Replicas, tribute vehicles, and newly constructed vehicles do not automatically qualify for this exception.

Original Equipment Manufacturer (OEM) Fuel Tanks

Production-based Pioneer and Vintage Era vehicles may retain their original OEM fuel tanks when specifically permitted by their individual category rules.

OEM fuel tanks must remain in their original mounting locations, be securely attached, and be adequately protected against impacts and punctures.

Where necessary, additional skid plates or protective structures must be installed to protect the fuel tank.

OEM fuel tanks must not compromise occupant safety or allow fuel to enter the passenger compartment.

All OEM fuel tanks must incorporate appropriate rollover protection to prevent fuel leakage if the vehicle is overturned.

Technical Inspection

All fuel tanks, fuel cells, mounting systems, fittings, and associated fuel delivery components must remain in safe operating condition throughout the event.

NORRA reserves the right to inspect and reject any fuel storage system, installation, or modification deemed unsafe or noncompliant by the Chief Scrutineer or designated Technical Inspector.

3.6.3 Fuel Filler, Vents, and Caps

All fuel filler lines, caps, fittings, and ventilation components must be securely installed and protected against accidental opening, disconnection, or damage during competition, impacts, or rollovers.

Fuel system design and installation must prevent fuel from escaping through pickup lines, filler necks, connections, or breather vents if the vehicle is partially or completely overturned.

Fuel Ventilation and Rollover Protection

All fuel cells must incorporate properly functioning rollover check valves in their ventilation systems to prevent fuel leakage in the event of a rollover.

Fuel vent lines must be routed as follows:

a) Extend at least 4 inches above the top of the fuel cell.

b) Continue toward one side of the vehicle, extending at least 3 inches beyond the fuel cell.

c) Route back across to the opposite side of the fuel cell.

d) Extend downward to a point below the vehicle's belly pan or at least 3 inches below the bottom of the fuel cell, whichever is lower.

Vent lines must be securely fastened, protected from damage, and routed away from exhaust components, excessive heat, and potential ignition sources.

The purpose of this routing configuration is to minimize the possibility of fuel escaping through the ventilation system when the vehicle is on its side or completely inverted.

Fuel Fillers and Caps

All fuel filler necks attached to the vehicle chassis, frame, or body panels must incorporate a flexible coupling between the filler assembly and the fuel tank to accommodate chassis movement and reduce the risk of damage or separation.

Fuel filler caps must be securely fastened and designed to prevent accidental opening or fuel leakage during impacts or rollovers.

All fuel fillers must be surrounded by an appropriate splash guard or protective boot. A properly sealed body panel may serve as a splash guard if it provides equivalent protection.

Splash guards must direct spilled fuel outside the vehicle and away from the occupant compartment, engine, exhaust system, brakes, and other potential ignition sources.

All fuel cells must incorporate a properly functioning rollover check valve in the fuel filler system.

Technical Inspection

All fuel filler assemblies, vent lines, caps, valves, and associated components must remain securely mounted, leak-free, and in safe operating condition throughout the event.

NORRA reserves the right to inspect and reject any fuel filler, ventilation system, or installation deemed unsafe or noncompliant by the Chief Scrutineer or designated Technical Inspector.

3.7 General Vehicle Components

3.7.1 Throttles

All carbureted vehicles equipped with a foot-operated throttle must have a minimum of two independent throttle return springs, each capable of providing at least 2 lbs. of return force. The springs must be securely attached to the carburetor or throttle linkage and must ensure that the throttle returns to the fully closed position if either spring fails.

All throttle linkages, cables, pedals, and associated components must operate smoothly and return freely to the idle position without binding, sticking, or interference.

A positive throttle stop or equivalent mechanical device must be installed to prevent throttle linkage from passing over center or becoming stuck in the open position.

Vehicles equipped with OEM fuel injection or electronic throttle control systems are exempt from the dual return spring requirement, provided the throttle system retains its original safety features and operates correctly.

Hand-operated throttles may be permitted when required due to a driver's physical limitations. Such systems must provide equivalent safety and return-to-idle functionality and are subject to approval by the Chief Scrutineer or designated Technical Inspector.

All throttle systems must remain in safe operating condition throughout the event. NORRA reserves the right to inspect and reject any throttle installation or modification deemed unsafe during Technical Inspection or at any time during competition.

3.7.2 Exhaust

All vehicles must be equipped with a properly installed exhaust system designed to safely direct exhaust gases away from the occupant compartment, fuel tanks, fuel cells, tires, and other heat-sensitive components.

Exhaust pipes must extend beyond the rear of the occupant compartment and discharge toward the rear or outside of the vehicle in a manner that prevents exhaust gases, excessive heat, or fumes from entering the cockpit.

All exhaust components, including headers, pipes, mufflers, and mounting brackets, must be securely attached and maintained in good operating condition. Exhaust systems must be free from significant leaks, loose components, or damage that could compromise vehicle safety.

Exhaust pipes and components must maintain adequate clearance from fuel lines, brake lines, electrical wiring, and other heat-sensitive materials. Appropriate heat shielding must be installed where necessary.

NORRA reserves the right to inspect and reject any exhaust system or installation deemed unsafe by the Chief Scrutineer or designated Technical Inspector.

3.7.3 Driveshafts

All front-engine vehicles equipped with exposed driveshafts must have a securely mounted driveshaft safety loop or retaining strap designed to prevent the driveshaft from contacting the ground or entering the occupant compartment in the event of a driveline failure.

The driveshaft retainer must be constructed from one of the following materials:

a) Steel strap with a minimum thickness of 0.25 inch and a minimum width of 2 inches.

b) Heavy-duty nylon webbing with a minimum width of 2 inches, properly rated and suitable for driveshaft retention.

The safety loop or retaining strap must be securely attached to a structural chassis or frame member and positioned within 6 inches of the front driveshaft universal joint or slip yoke.

The retaining system must be designed and installed to prevent the front of the driveshaft from dropping to the ground if the driveline becomes disconnected, including when the rear suspension is fully compressed.

The safety loop must provide sufficient clearance for normal driveshaft rotation and suspension movement while minimizing excessive driveshaft movement or whipping in the event of failure.

All driveshaft retaining devices, mounting hardware, and associated components must remain securely installed and in safe operating condition throughout the event.

NORRA reserves the right to inspect and reject any driveshaft retaining system deemed unsafe or noncompliant by the Chief Scrutineer or designated Technical Inspector.

3.7.4 Fluid Coolers

All oil coolers, transmission coolers, and radiators located ahead of the driver or co-driver, or within the occupant compartment, must be equipped with protective shrouds or barriers designed to prevent hot fluids from spraying, leaking, or entering the occupant compartment in the event of a component failure or rupture.

All fluid lines and hoses routed through the occupant compartment must be securely mounted and protected by appropriate shielding or enclosed channels to prevent direct contact between occupants and hot or pressurized fluids in the event of a leak or failure.

Steel-braided hoses alone do not constitute adequate protective shielding and must have additional protection when routed through the occupant compartment.

All cooling system components, including radiators, oil coolers, transmission coolers, hoses, fittings, and mounting brackets, must be securely installed and maintained in safe operating condition.

Fluid lines must be routed to prevent chafing, kinking, excessive vibration, and contact with sharp edges, moving components, or high-temperature surfaces.

NORRA reserves the right to inspect and reject any cooling system installation or fluid line routing deemed unsafe by the Chief Scrutineer or designated Technical Inspector.

3.7.5 Auxiliary Equipment

All vehicles must be equipped with a fully functional electrical charging system, including an alternator or generator, capable of maintaining adequate electrical power throughout the event.

All engine cooling components, including cooling fans and water pumps on liquid-cooled engines, must be properly installed and fully operational.

Air-cooled engines must have their original or appropriately modified cooling systems in proper working condition.

All electrical components, including wiring, connections, switches, and charging equipment, must be securely installed, properly protected, and maintained in safe operating condition.

Vehicles must begin the event with all required electrical and cooling systems fully operational and must maintain these systems in safe working condition throughout the competition.

NORRA reserves the right to inspect and reject any electrical or cooling system installation deemed unsafe or noncompliant by the Chief Scrutineer or designated Technical Inspector.

3.7.6 Driver's Compartment

All vehicle occupants must be able to enter and exit the occupant compartment quickly, safely, and without assistance, regardless of the vehicle's position, including in the event of a rollover.

Doors, window nets, safety harnesses, and other occupant restraint systems must be designed and installed to allow rapid emergency exit without the use of tools or assistance from outside the vehicle.

The occupant compartment must be adequately separated from fuel tanks, fuel lines, engine fluids, batteries, and other potentially hazardous components by properly installed firewalls or protective bulkheads.

Firewalls and bulkheads must be securely mounted and designed to prevent fuel, hot fluids, fumes, or other hazardous substances from entering the occupant compartment during normal operation or in the event of a leak, impact, or rollover.

All openings and penetrations through firewalls or bulkheads must be properly sealed to maintain effective separation between the occupant compartment and hazardous areas.

NORRA reserves the right to inspect and reject any occupant compartment design, installation, or modification deemed unsafe by the Chief Scrutineer or designated Technical Inspector.

3.7.7 Doors and Latches

All vehicles equipped with operational doors must have properly functioning positive locking mechanisms to prevent accidental opening during competition, impacts, or rollovers.

In addition to the primary door latch, each operational door must be equipped with an independent secondary latching device designed to keep the door securely closed in the event of primary latch failure.

Secondary latching devices may include approved safety straps, mechanical latches, or other secure retention systems, subject to approval by NORRA Technical Inspection.

All door latching mechanisms must be securely installed, easily accessible, and capable of being released by occupants without tools or outside assistance to allow rapid emergency exit.

All doors, hinges, latches, and associated mounting hardware must remain in safe operating condition throughout the event.

NORRA reserves the right to inspect and reject any door or latching system deemed unsafe or noncompliant by the Chief Scrutineer or designated Technical Inspector.

3.7.8 Firewalls

All vehicles must be equipped with a properly installed firewall or protective bulkhead designed to separate the occupant compartment from the engine, fuel tanks, fuel lines, and other potential fire or fluid hazards.

Firewalls should be constructed from metal or other fire-resistant materials approved by NORRA Technical Inspection and must provide adequate protection against flames, hot fluids, and fuel leakage.

Firewall Construction and Coverage

Firewalls must be liquid-tight and extend from at least the driver's shoulder height to the vehicle floor, covering the full width of the occupant compartment from one side of the body to the other.

If a rear-mounted fuel cell extends above the driver's shoulder height, the firewall must extend at least 2 inches above the top of the fuel cell.

On front-engine vehicles, the hood may be considered an extension of the firewall, provided the overall design adequately separates the occupant compartment from potential fire hazards.

Firewall Openings and Sealing

All openings through the firewall for structural members, wiring, fuel lines, brake lines, or other components must be kept to the minimum size necessary.

Clearance around components passing through the firewall must not exceed 0.0625 inch (1/16 inch) unless properly sealed with an approved fire-resistant material.

All firewall penetrations must be sealed using appropriate grommets, fire-resistant sealants, or other suitable sealing methods. Metallic tape may be used where appropriate, provided it maintains an effective seal under operating conditions.

Firewalls and bulkheads must be securely attached and maintained in good condition, free from significant gaps, cracks, or damage that could compromise occupant protection.

NORRA reserves the right to inspect and reject any firewall construction, installation, or modification deemed unsafe or noncompliant by the Chief Scrutineer or designated Technical Inspector.

3.7.9 Floorboards

All vehicles must be equipped with properly installed floorboards or belly pans designed to protect occupants from rocks, debris, and other hazards encountered during off-road competition.

Construction and Mounting

Floorboards and belly pans must be securely attached to the vehicle chassis, frame, or properly reinforced structural members.

Unless the floorboard is an integral part of the vehicle body or chassis, it must be secured using a minimum of six (6) 1/4-inch-diameter bolts per side, or equivalent high-strength fasteners.

Dzus fasteners and other quick-release fasteners are prohibited as the primary method of securing floorboards or belly pans.

All mounting hardware must be properly secured against loosening and capable of maintaining the floorboard or belly pan in position during impacts, vibration, and rollovers.

Floorboard Coverage and Occupant Protection

Floorboards must provide continuous protection across the entire occupant compartment, extending from ahead of the pedal assembly to behind the seats and from the outer edge of one side of the occupant compartment to the other.

The forward section of the floorboard must extend upward in front of the pedal assembly to protect the occupants' feet and lower legs from rocks and debris.

Floorboards and belly pans must be constructed and installed to prevent debris from entering the occupant compartment and must not interfere with pedal operation, steering components, or emergency occupant exit.

All floorboard and belly pan components must remain securely mounted and in safe operating condition throughout the event.

NORRA reserves the right to inspect and reject any floorboard, belly pan, or mounting arrangement deemed unsafe or noncompliant by the Chief Scrutineer or designated Technical Inspector.

3.7.10 Bumpers

All vehicles must be equipped with properly constructed and securely mounted front and rear bumpers designed to provide protection during off-road competition.

Bumper Construction and Safety

Front and rear bumpers, nerf bars, frame extensions, and other external protective structures must not have sharp edges, exposed tubing ends, or hazardous protrusions that could cause injury or damage to other vehicles.

All exposed tubing ends must be securely capped or rounded to eliminate sharp edges and reduce the risk of penetration during impacts.

Bumpers and protective bars must be designed and installed to minimize the possibility of two vehicles becoming hooked, entangled, or locked together during contact.

Mounting and Installation

All bumpers and protective structures must be securely attached to the vehicle chassis or properly reinforced structural mounting points.

Bumpers must be designed to withstand normal off-road racing conditions without becoming loose or creating additional hazards.

Bumper designs must not interfere with steering, suspension movement, or the safe operation of the vehicle.

All bumpers, nerf bars, and associated mounting hardware must remain securely attached and in safe operating condition throughout the event.

NORRA reserves the right to inspect and reject any bumper, nerf bar, or external protective structure deemed unsafe or noncompliant by the Chief Scrutineer or designated Technical Inspector.

3.7.11 Mirrors

All vehicles must be equipped with at least one properly mounted rear-view mirror that provides the driver with a clear and reasonably unobstructed view of the area behind the vehicle.

Mirrors must have a minimum reflective surface area of 6 square inches and must be securely mounted to prevent excessive vibration, movement, or detachment during competition.

Interior or exterior rear-view mirrors are permitted, provided they offer adequate rearward visibility from the driver's normal seated position.

Mirrors must be free from cracks, damage, or other defects that could impair visibility and must remain in safe operating condition throughout the event.

NORRA reserves the right to inspect and reject any mirror or mounting arrangement deemed unsafe or noncompliant by the Chief Scrutineer or designated Technical Inspector.

3.7.12 Skid Plates

All vehicles must be equipped with properly installed skid plates designed to protect the front suspension, steering, and brake components from rocks, debris, and impacts encountered during off-road competition.

Construction and Materials

Skid plates must be constructed from metal or Ultra-High-Molecular-Weight (UHMW) polyethylene with a minimum thickness of 0.250 inch (1/4 inch), unless otherwise specified by individual category rules.

Skid plates must provide adequate coverage of critical components without interfering with steering operation, suspension travel, or vehicle ground clearance.

Mounting and Installation

All skid plates must be securely attached to the vehicle chassis, frame, or properly reinforced structural mounting points using appropriate hardware capable of withstanding vibration and impacts.

Skid plates must be free from sharp edges, loose components, or damage that could compromise vehicle safety.

All skid plates and mounting hardware must remain securely installed and in safe operating condition throughout the event.

NORRA reserves the right to inspect and reject any skid plate or mounting arrangement deemed unsafe or noncompliant by the Chief Scrutineer or designated Technical Inspector.

3.7.13 Storage

All spare parts, tools, recovery equipment, and other items carried onboard must be securely fastened to prevent movement, shifting, or detachment during competition, impacts, or rollovers.

Equipment Storage and Mounting

All equipment must be stored in designated compartments or securely attached to the vehicle chassis or properly reinforced mounting points using appropriate brackets, straps, or retaining systems.

Heavy items, including spare tires, jacks, tools, batteries, and replacement components, must be properly secured to prevent them from becoming hazardous projectiles during an accident.

Storage compartments, toolboxes, and equipment containers must have secure closures capable of remaining fastened under normal racing conditions and in the event of a rollover.

Occupant Protection

Spare parts and equipment must be positioned to minimize the risk of injury to occupants and must not interfere with safety harnesses, emergency exits, vehicle controls, or visibility.

Sharp or pointed objects must be adequately covered or protected to prevent injuries during impacts or sudden vehicle movements.

All storage systems and mounting hardware must remain securely installed and in safe operating condition throughout the event.

NORRA reserves the right to inspect and reject any equipment storage or mounting arrangement deemed unsafe or noncompliant by the Chief Scrutineer or designated Technical Inspector.

3.7.14 Chassis and Body

All body components required by the individual vehicle category rules must remain securely installed throughout the event, except in cases of accidental damage sustained during competition.

Vehicle Classification

Vehicle classification in the Pioneer and Vintage Eras shall be determined primarily by the chassis design, construction, suspension configuration, and drivetrain layout, rather than by the external appearance or body style alone.

Installing a different body on a vehicle does not automatically qualify it for another category.

For example, a purpose-built tubular buggy chassis with a mid-mounted or rear-mounted engine and transaxle cannot compete in a truck category solely because it is fitted with a truck-style body.

Body Requirements

All required body panels and structural components must comply with the specifications established for the vehicle's respective Era and category.

Body modifications must not compromise vehicle safety, structural integrity, occupant protection, or compliance with the applicable category rules.

NORRA reserves the right to inspect, classify, or reclassify any vehicle based on its actual chassis configuration, construction, and mechanical characteristics.

Final vehicle classification and eligibility are subject to approval by NORRA Technical Inspection.

3.7.15 Fenders and Hood

All vehicles competing in the Pioneer and Vintage Eras must have front and rear fenders and a hood securely installed, unless otherwise specified by individual category rules.

Mounting and Installation

All fenders, hoods, and associated body panels must be securely attached to the vehicle using appropriate mounting brackets, fasteners, or approved retaining systems capable of withstanding vibration, impacts, and normal off-road racing conditions.

Hoods must be equipped with secure latching or retention mechanisms to prevent accidental opening or detachment during competition.

All body panels must be free from hazardous sharp edges, loose components, or damage that could compromise vehicle safety.

Category Compliance

Fender and hood configurations, materials, dimensions, and permitted modifications must comply with the requirements established for each vehicle's respective Era and category.

Vehicles originally designed without certain body panels may be exempt when specifically permitted under their individual category rules.

All required body panels must remain securely installed throughout the event, except in cases of accidental damage sustained during competition.

NORRA reserves the right to inspect and reject any fender, hood, or body panel installation deemed unsafe or noncompliant by the Chief Scrutineer or designated Technical Inspector.

3.8 Engine, Transmission, and Drivelines

3.8.1 Engine Displacement

All vehicles competing in the Pioneer and Vintage Eras must comply with the engine displacement, configuration, and technology restrictions established by their respective category rules.

Engine Eligibility and Restrictions

Engine manufacturer, displacement, number of cylinders, and configuration are permitted as specified by individual category rules.

Engine modifications, replacements, and performance upgrades must comply with the applicable Era and category requirements, including any restrictions on engine design, induction systems, and period-correct technology.

Modern engine swaps are permitted only when expressly allowed by the applicable category rules. Installing a modern engine does not automatically qualify a vehicle for competition in a Pioneer or Vintage category.

Engine Inspection and Verification

NORRA reserves the right to verify engine displacement, configuration, and compliance with category specifications during Technical Inspection or at any time throughout the event.

Competitors are responsible for providing accurate engine specifications and supporting documentation when requested by NORRA Technical Inspection.

Any engine found to be noncompliant with the applicable category rules may result in vehicle reclassification, penalties, or disqualification, subject to NORRA regulations.

3.8.2 Fuel Delivery

Carburetion and fuel injection systems are permitted only as specified by the applicable Pioneer or Vintage Era category rules.

All fuel delivery systems, including carburetors, fuel injectors, fuel pumps, regulators, and associated components, must comply with the engine technology and configuration restrictions established for each category.

Fuel delivery modifications and upgrades are permitted unless specifically prohibited by individual category rules.

NORRA reserves the right to inspect and verify fuel delivery systems for compliance with the applicable category regulations during Technical Inspection or at any time throughout the event.

3.8.3 Transmission

All vehicles competing in the Pioneer and Vintage Eras must be equipped with a fully functional transmission that includes an operational reverse gear.

Transmission and Drivetrain Requirements

All transmissions, transaxles, transfer cases, and associated drivetrain components must comply with the specifications and technology restrictions established by the applicable Era and category rules.

Vehicles competing in categories requiring four-wheel drive (4WD) must have a fully operational four-wheel-drive system capable of delivering power to all four wheels.

All transmission and drivetrain components must be securely installed, properly maintained, and free from defects that could compromise vehicle safety or operation.

Technical Inspection

NORRA reserves the right to inspect and verify transmission and drivetrain compliance during Technical Inspection or at any time throughout the event.

Vehicles with inoperative reverse gears or nonfunctional required four-wheel-drive systems may be prohibited from competing until the condition has been corrected.

3.8.4 Turbochargers and Superchargers

Turbochargers, superchargers, and other forced induction systems are prohibited on gasoline-powered vehicles competing in the Pioneer and Vintage Eras unless expressly permitted by individual category rules.

All forced induction systems must comply with the engine technology and configuration restrictions established for the applicable Era and category.

4 Technology Eras

NORRA recognizes two Technology Eras within the NORRA LEGACY CLASSIC regulations: Pioneer and Vintage. These Eras are intended to group historically significant off-road racing vehicles with similar design, engineering, and technological characteristics.

Vehicle classification is based primarily on the technology available during the corresponding historical period rather than solely on the vehicle's year of manufacture. Classification considers chassis design, suspension configuration, drivetrain, engine technology, and other period-appropriate mechanical characteristics.

All vehicles must comply with the technical requirements established for their respective Era and category.

Era Championships

In addition to individual category awards, NORRA recognizes an Era Champion for both the Pioneer and Vintage Eras.

The purpose of the Era Championship is to recognize competitors who best represent the spirit and traditions of historic Baja off-road racing through preparation, reliability, consistency, historical authenticity, and successful completion of the event.

The Era Champion will not necessarily be determined solely by the fastest elapsed time. Championship recognition will prioritize the following criteria:

1. Completion of all official competition miles.
2. Fewest race penalties.
3. Ironman competitors (a single driver completing the entire event), when applicable.
4. Fastest elapsed time.
5. Additional tie-breaking criteria established and published by NORRA.

The intent of these championships is to recognize competitors who preserve and race historically significant vehicles while promoting safe, fair, and competitive participation.

NORRA CLASSIC Technology Eras

Pioneer Era (1967–1982)

The Pioneer Era represents the formative years of Baja off-road racing, featuring early purpose-built desert racing vehicles and modified production-based vehicles developed during this period.

Representative vehicles and technologies include early Meyers Manx and Burro-style buggies, original Stroppe-built Broncos, early independent rear suspension (IRS) buggies, and production-based trucks and four-wheel-drive vehicles.

Vehicle eligibility is determined by period-appropriate chassis, suspension, drivetrain, and engine technology.

Shock absorber dimensions, tire sizes, wheelbase limitations, and other technical restrictions are established by the individual Pioneer category rules.

Vintage Era (1983–2000)

The Vintage Era represents the evolution of Baja off-road racing through the development of more advanced suspension systems, high-performance engines, racing transaxles, and increasingly specialized competition vehicles.

Representative vehicles and technologies include beam-front racing buggies with larger engines, advanced racing transaxles, modified production-based trucks, and linked rear suspension systems.

Modern high-performance shock absorber technology may be permitted, subject to individual category restrictions. Maximum tire diameter is generally limited to 37 inches, unless otherwise specified by the applicable category rules.

Vehicle eligibility is determined by compliance with the technological characteristics and specific regulations of the Vintage Era.

4.1 The Exception Rule

NORRA recognizes that certain historically significant racing vehicles may have incorporated technologies, components, or configurations that exceed the limitations established for their respective Pioneer or Vintage Era.

Exceptions may be granted to authentic historical race vehicles when documented evidence demonstrates that the specific technology or configuration was originally used by that vehicle during its period of competition.

Examples include the original Big Oly Ford Bronco, which featured advanced race truck technology as early as 1970, and vehicles documented to have competed with Mickey Thompson 36-inch tires as early as 1976.

Eligibility and Documentation

Exceptions are limited to authentic historical race vehicles with verifiable competition history. Replicas, tribute builds, newly constructed vehicles, and undocumented vehicles are not eligible for historical technology exceptions and must comply with all applicable Era and category restrictions.

Competitors requesting an exception must provide supporting documentation, which may include historical race photographs, original vehicle specifications, period race records, or other credible evidence demonstrating that the technology was used on the specific vehicle during its original competition history.

Exception Request and Approval

All exception requests must be submitted by email to tech@norra.com at least ninety (90) days before the event, with all supporting documentation attached.

Requests will be reviewed by NORRA Technical Inspection. Approval is not automatic and remains at NORRA's discretion.

Any approved exception applies only to the specific vehicle and documented configuration authorized by NORRA. Approval does not establish a precedent for other vehicles or categories.

Historical exceptions do not exempt vehicles from mandatory safety requirements. NORRA reserves the right to deny or revoke an exception if the vehicle or modification is determined to be unsafe or inconsistent with the intent of the Pioneer or Vintage Era regulations.

First came the Pioneers, creating the sport of desert racing…

4.2 PIONEER Era (1967 - 1982)

The Pioneer Era celebrates the origins of Baja off-road racing, recognizing the pioneering vehicles, engineering, and innovations that helped establish the sport between 1967 and 1982.

Vehicles competing in this Era must comply with the period-appropriate technology and specifications established for their respective categories.

Pioneer VW Legacy (Meyers Manx, VW Bugs and Early Buggies)

- VW Type 1 engines only, any displacement. Single carburetor required; fuel injection prohibited.
- VW Type 1-based transaxles and drivetrain; IRS permitted.
- VW-type front and rear suspension with stock-length and stock-width arms.
- Stock-width front beam required.
- Maximum wheelbase: 100 inches, measured at ride height.
- Maximum tire diameter: 33 inches.
- Maximum shock diameter: 2 inches (OD).
- Coilover and bypass shocks prohibited; remote reservoirs permitted.

Pioneer Buggy

- VW Type 1 engines only, any displacement. Single carburetor required; fuel injection prohibited.
- VW transaxles permitted, including IRS Bus 091, Bus 002, and swing-axle configurations.
- Front beam suspension of any width, with arms no more than 2.5 inches longer than stock.
- Rear suspension arms limited to 3 × 3 inches over stock.
- Maximum wheelbase: 110 inches, measured at ride height.
- Maximum tire diameter: 33 inches.
- Maximum shock diameter: 2 inches (OD).
- Coilover and bypass shocks prohibited; remote reservoirs permitted.

Pioneer Trucks

- Body style must have existed during the Pioneer Era.
- Original production-based chassis and stock-concept suspension required.
- Semi-elliptical leaf springs with a single fixed pivot.
- Maximum of two rear suspension links permitted.
- Period-correct engine design originally available for the vehicle model; cast-iron engine block required.
- Carbureted, naturally aspirated engines only.
- Period-correct transmission design; electronic transmission controls prohibited.
- Maximum tire diameter: 35 inches.
- Maximum shock diameter: 2 inches (OD).
- Coilover and bypass shocks prohibited; remote reservoirs permitted.

Pioneer 4x4s

- Body design and chassis must be from 1982 or earlier.
- Production-based chassis and stock-concept suspension required.
- Functional four-wheel drive with a solid front axle.
- Wheelbase and track width must remain within ±3 inches of stock.
- Maximum wheel diameter: 15 inches.
- Maximum tire diameter: 35 inches.
- Period-correct engine design originally available for the vehicle model.
- Carbureted, naturally aspirated engines only.
- Period-correct transmission design; electronic transmission controls prohibited.
- Maximum of two rear suspension links permitted.
- Maximum shock diameter: 2 inches (OD).
- Coilover and bypass shocks prohibited; remote reservoirs permitted.

Pioneer Era Championship

All four Pioneer categories are eligible to compete for the Pioneer Era Overall Championship (Pioneer O/A), subject to the Era Championship criteria established in these regulations.

The specifications above provide a general overview of each category. Competitors must comply with the complete technical requirements established in the corresponding Pioneer category rules.

The Pioneers evolved, giving rise to the Vintage Era

4.3 VINTAGE Era (1983 – 2000)

The Vintage Era represents the evolution of Baja off-road racing through the development of more powerful engines, advanced suspension systems, racing transaxles, and increasingly specialized competition vehicles between 1983 and 2000.

Vehicles competing in this Era must comply with the technology and specifications established for their respective categories.

Vintage Open Buggies

- Any naturally aspirated engine permitted.
- Any manufacturer or type of racing transaxle permitted; solid rear axles prohibited.
- Front suspension may use beam or A-arm designs consistent with technology available through 2000.
- Independent rear suspension (IRS) required.
- Shock absorber and spring configurations are unrestricted.
- Maximum tire diameter: 37 inches.

Vintage 6-Cylinder Buggies

- Production-based naturally aspirated engines with a maximum of six cylinders.
- Racing transaxles permitted; solid rear axles prohibited.
- Beam-type front suspension required.
- Independent rear suspension (IRS) required.
- Maximum shock diameter: 2.5 inches (OD).
- Coilover and external bypass shocks permitted.
- Maximum tire diameter: 35 inches.

Vintage 4-Cylinder Buggies

- Production-based naturally aspirated engines with a maximum of four cylinders.
- Racing transaxles permitted; solid rear axles prohibited.
- Beam-type front suspension required.
- Independent rear suspension (IRS) required.
- Maximum shock diameter: 2.5 inches (OD).
- Coilover and external bypass shocks permitted.
- Maximum tire diameter: 35 inches.

Vintage Open Trucks

- Body style must have existed during the Vintage Era.
- Production-based truck chassis required, with permitted modifications.
- Naturally aspirated production-based U.S. pushrod engines.
- Front suspension must retain the original production suspension concept.
- Linked rear suspension with coilovers permitted.
- Rear independent suspension prohibited.
- Shock and spring configurations are unrestricted.
- Maximum tire diameter: 37 inches.

Vintage 6-Cylinder Trucks

- Period-appropriate production-based truck or SUV body and chassis.
- Production-based naturally aspirated engines with a maximum of six cylinders.
- Front suspension must retain the original production suspension concept.
- Linked rear suspension with coilovers permitted.
- Rear independent suspension prohibited.
- Shock and spring configurations are unrestricted.
- Maximum tire diameter: 37 inches.

Vintage 4-Cylinder Trucks

- Period-appropriate production-based truck or SUV body.
- Original production chassis and stock-concept suspension required.
- Production-based naturally aspirated engines with a maximum of four cylinders.
- Rear leaf springs required; suspension links permitted within category restrictions.
- Maximum shock diameter: 2.5 inches (OD).
- Internal and external bypass shocks permitted.
- Maximum tire diameter: 35 inches.

Vintage Open Trucks with Rear Leafs

- Body style must have existed during the Vintage Era.
- Production-based truck or SUV chassis with full frame required.
- Any production naturally aspirated engine permitted.
- Front suspension must retain the original production suspension concept.
- Rear leaf springs required as the primary suspension system.
- Rear independent suspension prohibited.
- Shock absorber configurations are unrestricted.
- Maximum tire diameter: 37 inches.

Vintage Open Trucks and Broncos with 4X4

- Production-based trucks, Broncos, and SUVs meeting the applicable category requirements.
- Functional four-wheel drive required.
- Production-based chassis and stock-concept front suspension.
- Maximum track width: 92 inches, measured outside of tires.
- Factory wheelbase must be maintained within ±4 inches.
- Naturally aspirated pushrod engines.
- Shock and spring configurations are unrestricted.
- Maximum tire diameter: 37 inches.

Vintage Short Wheelbase Trucks 4X4

- Production-based short-wheelbase trucks and SUVs.
- Maximum wheelbase: 108 inches.
- Maximum track width: 84 inches, measured outside of tires.
- Solid front axle and functional four-wheel drive required.
- Naturally aspirated engines permitted.
- Front suspension must retain the original production suspension concept.
- Shock and spring configurations are unrestricted.
- Maximum tire diameter: 37 inches.

Vintage Production Cars

- Production-based passenger vehicles, including sedans, coupes, and convertibles from the Vintage Era.
- Trucks and SUVs are not permitted.
- Vehicles must remain recognizable as their original production models.
- Front and rear fenders required.
- Maximum tire diameter: 35 inches.

Vintage Class 5 Classic

- VW Baja Bug-style vehicles based on eligible VW and Porsche production platforms.
- Original VW floor pan, steel body, and doors must be retained.
- Front and rear suspension modifications permitted, provided the original suspension concept is maintained.
- Naturally aspirated, air-cooled, four-cylinder VW-concept engines permitted.
- Six-cylinder Porsche engines permitted only in Porsche 911 vehicles.
- Turbochargers and superchargers prohibited.
- Front and rear fenders required; Baja Bug appearance must be maintained.
- Maximum wheelbase: 105 inches ±0.5 inch.
- Safety fuel cell required.

Vintage Class 11 Classic

- Stock-production VW sedans with original chassis, body, and mechanical configuration, except for specifically permitted modifications.
- Stock front and rear suspension components required, with limited modifications permitted.
- Maximum shock diameter: 2 inches (OD); one shock absorber per wheel.
- Coilover, air, and bypass shocks prohibited; hydraulic bump stops prohibited.
- VW Type 1 naturally aspirated engine, maximum displacement: 1600cc.
- Stock VW Type 1 four-speed transaxle required.
- Stock VW 4 × 15-inch wheels or specifically approved aftermarket alternatives.
- Maximum tire diameter: 31 inches; maximum tire width: 10 inches.
- Original fuel tank in stock location or approved safety fuel cell permitted.
- Spare tire required.

Vintage Era Championship

All twelve Vintage categories are eligible to compete for the Vintage Era Overall Championship (Vintage O/A), subject to the Era Championship criteria established in these regulations.

The specifications above provide a general overview of the Vintage Era categories. Competitors must comply with the complete technical requirements established in the corresponding Vintage category rules. In the event of a discrepancy, the detailed category regulations shall take precedence.

5 Pioneer Categories (1967 - 1982)

5.1 Pioneer VW Legacy (Meyers Manx, VW Bugs and Early Buggies)

The spirit of this category is to provide a home for Meyers Manx type-based and Early Tube Chassis Buggies.

- Engines can only be VW Type 1 but can be built to any size. No fuel injection, vehicles must run single carburetor with single or two barrels.
- Transaxles and Drivetrain must be VW Type 1 based (IRS Allowed).
- The maximum wheelbase is 100”, measured at ride height.
- VW Type front and rear suspension pieces are required; ball joint or link pin style is allowed. Stock length & width front and rear arms must be retained. Stock width beam must be retained.
- Front and Rear Disc Brakes are allowed.
- Rack and Pinion Steering & Combo Spindles are Allowed due to Parts Availability (No drop and King Kong combos are allowed)
- Power Steering is allowed.
- Aftermarket Wheels are allowed.
- The maximum shock diameter is 2" (OD). No coilovers. No bypass shocks (internal or external). Remote reservoirs allowed, rear shock mounting location is open.
- The maximum tire diameter is 33".
- Aftermarket VW concept design Fuel Tanks are allowed if mounted in stock location. If mounted in any other location must be a Fuel Cell.

5.2 Pioneer Buggy

The spirit of this category is to provide a home for non-production-based Buggies that raced in the 1967-1982 era.

- Engines can only be VW Type 1 but can be built to any size. No fuel injection, vehicles must run single carburetor with single or two barrels.
- Transaxles must be VW but can be IRS (Bus 091, Bus 002, or swing axle).
- The maximum wheelbase is 110", measured at ride height.
- Front suspension must be beam of any width, but arms can be no longer than 2.5" longer than stock.
- Rear suspension can be no greater than 3x3 over stock, 2-inch diameter Hydraulic Bump stops allowed.
- Front and Rear Disc Brakes are allowed.
- Rack and Pinion Steering & Combo Spindles are Allowed due to Parts Availability (No drop and King Kong combos are allowed)
- Power Steering is allowed.
- Aftermarket Wheels are allowed.
- The maximum shock diameter is 2" (OD). No coilovers. No bypass shocks (internal or external). Remote reservoirs allowed, shock mounting location is open.
- The maximum tire diameter is 33".

5.3 Pioneer Trucks

The spirit of this category is to provide a home for production-based Trucks that raced in the 1967-1982 era.

- The body style must have existed in this era.
- The chassis must be stock.
- The suspension must be of stock concept for the chassis.
- Leaf springs must be of a semi elliptical design and must have a single fixed pivot (single shackle).
- The maximum shock diameter is 2” (OD). No coilovers. No bypass shocks (internal or external). Remote reservoirs allowed.
- The maximum tire diameter is 35”.
- A maximum of 2 rear links is allowed.
- Engine shall be of a design/type which was sold for the vehicle model being raced. Iron Block only. Engine items with no restriction include engine internals, cylinder heads (provided number of valves per cylinder remains stock for the vehicle), camshaft (however must remain in stock location), intake and exhaust manifolds. Fuel delivery must be via a carburetor. Fuel injection of any type is not allowed. Ignition must use a mechanical distributor. Engines must be naturally aspirated (forced induction not allowed). Modern engines such as GM LS series or Ford Modular series are not allowed.
- Transmission can be of a design/type which was sold for the Era being raced. Electronic transmission controls are not allowed.

5.4 Pioneer 4x4s

The spirit of this category is to provide a home for production based 4x4 Trucks / SUVs as raced in the 1967-1982 era. Vehicles in this category must have working 4wd of a solid front axle design.

- Body must maintain design and style which was available in 1982 or older. Fiberglass replacement panels allowed only for hood and fenders. Flared and/or cut out fender opening allowed. Cut outs in hood for air cleaner allowed. Hood and front / rear fenders must be mounted on car at start of event. Stock grill required of a design matching the body style. Body must be mounted to chassis in the same location as stock however body lifts are allowed. Stock truck bed floor panels must be retained. Channeled or drop bodies are not allowed.
- Chassis (frame) must be stock 1982 or older.
- Trackwidth and Wheelbase must remain within +-3" of stock, measured from WMS to WMS.
- Tires shall have a maximum diameter of 35” as specified/marketed by the manufacturer. Wheels are limited to 15”.
- Engine shall be of a design/type which was sold for the vehicle model being raced. Engine items with no restriction include engine internals, cylinder heads (provided number of valves per cylinder remains stock for the vehicle), camshaft (however must remain in stock location), intake and exhaust manifolds. Fuel delivery must be via a carburetor. Fuel injection of any type is not allowed. Ignition must use a mechanical distributor. Engines must be naturally aspirated (forced induction not allowed). Modern engines such as GM LS series or Ford Modular series are not allowed.
- Rear End must be of a design and type which was originally sold for the vehicle model being raced. Housings may be reinforced/trussed or may be aftermarket fabricated pieces limited to a 3.5 inch OD tubing. Internals such as axle shafts, differentials/carriers and gears are unrestricted.
- The front axle must be of the same type available for the vehicle model being raced. Reinforcement is allowed. Internals including axles, diffs/carriers, gears, lockouts are unrestricted. As an example, a front Dana 60 is not allowed on an early Bronco, but a Dana 44 is allowed even if the vehicle originally came with a Dana 30.
- Brakes are open. Aftermarket disk brakes are allowed on all 4 corners. Power assist of any type is allowed if desired.
- Steering must be of a design that was available up to 1982 for the vehicle model being raced (ie box or rack). Power steering may be retrofitted using OEM or aftermarket pumps/boxes. Steering linkages may be stock or aftermarket/fabricated however must be of the same basic design as was available from the factory.

- The suspension must be of stock concept for the chassis. Suspension arms and linkages are to be of stock concept and may be reinforced. (ie double shear, weld in washers, etc.) A maximum of 2 rear links is allowed. Pivot points must remain in stock locations.
- Springs: Coil springs may be of any length/rate but must mounted in the stock locations. Leaf springs must be of a semi elliptical design and must have a single fixed pivot (single shackle).
- Shocks: The maximum shock diameter is 2” (OD). No coilovers. No bypass shocks (internal or external). Remote Reservoirs are allowed.
- Transmission is open but must be of a design/type which was sold up to 1982. Electronic transmission controls are not allowed.

6 Vintage Categories

6.1 Vintage Open Buggies

The spirit of this category is to provide a home for open class Buggies that raced from 1983 to 2000.

- Vehicle can be a buggy or a VW Beetle body.
- Any naturally aspirated engine may be used.
- Any brand or make of transaxle may be used, no live axles.
- Front suspension design could be Beam type or A-arms as it was until 2000.
- Rear suspension must be IRS.
- Shock and spring package is unlimited.
- The maximum tire diameter is 37”.

6.2 Vintage 6-Cylinder Buggies

The spirit of this category is to provide a home for limited displacement Buggies that raced from 1983 to 2000 era.

- Any production naturally aspirated engine up to 6-cylinders may be used.
- Any brand or make of transaxle may be used, no live axles.
- Front suspension must be a beam design.
- Rear suspension must be IRS.
- Shock and Spring package is limited to 2.5” outer diameter, coil overs and external bypasses allowed.
- The maximum tire diameter is 35”.

6.3 Vintage 4-Cylinder Buggies

The spirit of this category is to provide a home for limited displacement Buggies that raced from 1983 to 2000 era.

- Any production naturally aspirated engine up to 4-cylinders may be used.
- Any brand or make of transaxle may be used, no live axles.
- Front suspension must be Beam type.
- Rear suspension must be IRS.
- Shock and Spring package is limited to 2.5” outer diameter, coil overs and external bypasses allowed.
- The maximum tire diameter is 35”.

6.4 Vintage Open Trucks

The spirit of this category is to provide a home for Trucks and SUVs that raced in the 1983 to 2000 era.

- The body style must have existed in this era.
- The chassis must be based on a 1983 to 2000 production truck; the back half of the frame may be removed.
- The full unmodified frame must be in place from the front of the truck to the rear of the cab.
- The lower portion of the front 8” of the frame may be removed for ground clearance.
- Any production US naturally aspirated pushrod engine may be used.
- The front suspension must be of stock concept for the chassis. Rear may be linked on coilovers.
- Shock and spring package is unlimited. IRS not allowed.
- The maximum tire diameter is 37”.

6.5 Vintage 6-Cylinder Trucks

The spirit of this category is to provide a home for Trucks and SUVs that raced in the 1983-2000 era.

- The body style must have existed in this era.
- The chassis must be based on a 1983 to 2000 production truck or SUV; the back half of the frame may be removed.
- The full unmodified frame must be in place from the front of the truck to the rear of the cab.
- The lower portion of the front 8” of the frame may be removed for ground clearance.
- Any production naturally aspirated engine up to 6-cylinders may be used.
- The front suspension must be of stock concept for the chassis. Rear may be linked on coilovers.
- Shock and spring package is unlimited. IRS not allowed.
- The maximum tire diameter is 37”.

6.6 Vintage 4-Cylinder Trucks

The spirit of this category is to provide a home for Trucks and SUVs with limited engine size.

- The body style must have existed in this era.
- The chassis must be stock.
- The suspension must be of stock concept for the chassis, width could be +/- 2 inches.
- The lower portion of the front 8” of the frame may be removed for ground clearance.
- Any production naturally aspirated engine up to 4-Cylinders may be used.
- The front suspension must be of stock concept for the chassis.
- Rear Leaf springs only.
- The maximum shock diameter is 2.5” (OD), bypass shocks are allowed (internal or external).
- The maximum tire diameter is 35”.
- 3 or 4 links are allowed, however spring method must still be leafs.

6.7 Vintage Open Trucks with Rear Leafs

The spirit of this category is to provide a home for Trucks and SUVs that raced in the 1983-2000 era.

- The body style must have existed in this era.
- The chassis must be based on a 1983 to 2000 production truck or SUV. Full frame required.
- The full unmodified frame must be in place from the front of the truck to the rear of the truck.
- The lower portion of the front 8” of the frame may be removed for ground clearance.
- Any production naturally aspirated engine may be used.
- The front suspension must be of stock concept for the chassis. Rear must use leafs as primary suspension.
- Shock package is unlimited. IRS not allowed.
- The maximum tire diameter is 37”.

6.8 Vintage Open Trucks and Broncos with 4 Wheel Drive

The spirit of this category is to provide a home for Trucks and SUVs that raced in the 1978-2000 era as well as for IFS 4x4's from earlier eras but with Vintage era shock packages.

- The body style must have existed in this era.
- Factory wheelbase must be maintained + or – 4 inches
- Trackwidth must be 92 inches maximum measured outside of tires
- The chassis must be based on a 1978-to-2000-year production truck or SUV. Full frame required.
- The full frame must be in place from the front of the truck to the rear of the truck. C-notch allowed to the top edge of frame.
- The lower portion of the front 8" of the frame may be removed for ground clearance.
- Any naturally aspirated pushrod engine may be used.
- Any US manufactured transmission within 1978 to 2000 may be used.
- The front suspension must be of stock concept for the chassis. Pivot points should remain + or – 1 inch, modified radius arms are allowed.
- Steering design is open, any manufacturer steering box is allowed as long as it is mounted + or – 1 inch from stock box location.
- Rear End is open.
- Radiator mounting must be in the stock location between engine and grill.
- Shock and spring package is unlimited. IRS not allowed.
- Must have 4-wheel drive and be operational at start of rally.
- The maximum tire diameter is 37".

6.9 Vintage Short Wheelbase Trucks with 4 Wheel Drive

The spirit of this category is to provide a home for short wheelbase 4x4 Trucks and SUVs with modified suspensions and big shocks from the newer Eras.

- The body style must have existed in this era.
- The chassis must be based on a production truck or SUV of a design originally manufactured no later than 2000.
- The full frame must be in place from the front of the truck to the rear axle.
- C-notch allowed to the top edge of frame.
- The lower portion of the front 8" of the frame may be removed for ground clearance.
- Any naturally aspirated engine may be used.
- The maximum wheelbase is 108". Trackwidth is limited to 84 inches outside tire to outside tire.
- The front suspension must be of stock concept for the chassis.
- Shock and spring package is unlimited. IRS not allowed.
- Must have solid front axle 4-wheel drive.
- The maximum tire diameter is 37".

6.10 Vintage Production Cars

This is a vintage category for production-based passenger vehicles (sedans, coupes, and convertibles). Trucks and SUVs are not permitted in this category. Vehicles in this category must be 1967 to 2000 era.

- Fenders are required for all four wheels. Maximum tire size is 35”
- Vehicles in this category must be readily recognizable as the vehicle upon which it is based, at the discretion of NORRA.

6.11 Vintage Class 5

This class is intended for VW Baja bugs. Vehicles must be based on a VW type-1 sedan hardtop or convertible, 181 Safaris, 900 series Porsche, Karmann Ghias, or VW type-2 and type-3. Must retain Baja Bug appearance.

This class is an open class, and all components will be considered open unless restricted herein.

SUSPENSION COMPONENTS

Front and rear suspension systems may be modified or replaced if the stock concept (trailing-arms, swing-axles, IRS, etc.) is retained and wheelbase limit is not exceeded.

STEERING

No center steering.

BRAKES

Brakes are open. Turning brakes are allowed.

FUEL TANKS

Fuel cell mandatory.

ENGINE and ENGINE DISPLACEMENT

Any manufacturer air cooled, 4-cylinder single cam, push rod, VW concept engine allowed. Six (6) cylinder Porsche engine is allowed in a Porsche 911 only.

SUPERCHARGERS and TURBOCHARGERS

No turbo or superchargers allowed.

SEATING

Single or two seats are allowed. No center seating.

DRIVERS COMPARTMENT

Front and rear firewalls required. Interior sheet metal may be removed, but exterior appearance must be retained. Pedals may be of any manufacture but must be mounted on the left side of the vehicle.

DOORS AND LATCHES

Doors must remain stock. Doors may be welded or fastened closed.

FLOORBOARDS

Must retain original VW floor pan, which begins at front tip of the frame head and extends to the rear tip of the frame horns with an overall length of 107 inches plus or minus one (1”) inch. Pan may not be modified in any way. Frame heads may be interchanged early to late, late to early, modifications must be forward of the body mounting flange. Torsion adjusters are allowed.

CHASSIS and BODY

Front and rear fenders must be used. Front fenders may be one-piece fiberglass. Rear fenders must not measure less than 6 inches from the body, measured at the top center of the fender. Rear fender mounting height is open. Rear fenders must have rolled edges but may be made of any material.

Must retain an original VW floor pan, main steel body and doors.

The body may only be cut to a minimum to install Baja kit.

Body lift kits are allowed up to 3 5/8's.

Body must resemble a Baja Bug.

Steel body and doors must be retained. Hard body vehicles must retain a stock steel roof. Convertible bodies must retain windshield frames.

Maximum wheelbase is 105 inches plus or minus 1/2(.50) inch.

6.12 Vintage Class 11

OPEN WHEEL – STOCK VW SEDANS MUST BE A STOCK VW SEDAN AS DELIVERED IN THE U.S.A.

COMPETITION REGULATIONS

Any questions concerning chassis combinations will be decided by referring to VW factory parts manuals and /or VW of America booklet. This is a stock production class, and all components must remain stock except for those modifications allowed herein.

SUSPENSION COMPONENTS

FRONT SUSPENSION

Front axle torsion tube centers may be cut, rotated, rewelded to increase ground clearance or front adjusters may be used. Original seams may be welded (not reinforced) on the front beam. Shock towers may be additionally supported by the adding of a single gusset; gusset may not extend more than 2" above top torsion tube.

Stock front spindles and trailing arms must be used no additional material may be used. Sway bars may be removed. Filling of speedometer hole is permitted. Steering arm on spindle may be reinforced by welding a .25 gusset from the top of the spindle to the end of the steering arm. Front snubbers may be of any manufacture but must retain stock dimension and mounting methods. Suspension limiters allowed.

REAR SUSPENSION

Rear suspension torsion bars may be of any origin. Rear suspension spring plates may be of any origin. Torsion bar adjusters are allowed. Torsion bar grommets may be of any manufacturer but must retain stock VW dimensions.

Rear torsion bars may be additionally supported only by the attachment of a terminal end (support member) of the roll cage. Rear shock tower may be removed to body mounting bolt hole. Lower rear shock mounts may be removed or replaced but must bolt directly to rear trailing arm or swing axle. No remote mounted shocks. Rear trailing arms must remain stock, shape, size and configuration, but may be reinforced by adding material.

SHOCK ABSORBERS AND BUMP STOPS

Only one shock per wheel is allowed. Stock front shock mounts must be utilized. Shock mounting bolts may be changed to a maximum of 1/2 in diameter. Any manufacture shock allowed with 2.0" maximum outside diameter. Rear shock must not have an extended length longer than 18", center of mounting hole to center of mounting hole. Cooling fins and/or reservoirs allowed. No air shocks or coil over shocks allowed. No hydraulic bump stops allowed. No bypass shocks

allowed.

SECONDARY SUSPENSION

No secondary suspension allowed.

WHEELS AND TIRES

Any stock VW steel 4" x 15" wheel that bolts on a stock VW brake drum may be used. Aftermarket Mobelwagen Aluminum wheels MWR 430G Interceptor are also allowed. Wheel studs allowed. Any manufacturers tire and size allowed up to 31" tall and 10" wide as mounted and inflated on a 4" wide rim with 18 lbs of air. Spare tire is mandatory but may be mounted any place within body shell or trunk. Mobelwagen aluminum wheels are permitted.

FASTENERS

All nuts, bolts and component parts on each vehicles suspension system, chassis and running gear must be secured with S.A.E. grade 8 or better nuts, bolts and secured with either lock nuts, lock washers, cotter pins or safety wire and have at least one full thread showing through the nut.

STEERING AND BRAKE COMPONENTS

STEERING

Steering wheel play must be kept to a minimum. Drag link and tie rod ends must be secured and have a cotter pin in each one or lock nut. Any manufacturer's steering wheel may be used. Steering shaft is open. Use of pillow blocks are allowed. Steering box must be stock, but shims may be used between pitman arm and box. Steering components such as ball joints, steering arms, and tie rods must remain stock.

BRAKES

Brakes must be in a safe working condition and able to apply adequate force to lock up all four tires. Turning or steering brakes are allowed. Original VW type 1 drum brakes only on all wheels. Front and rear drums may not be interchanged. Any combination of brake linings allowed as long as stock dimensions are maintained. Any combination of VW master and wheel cylinders are allowed. Emergency brake is optional but if removed the opening must be covered.

ELECTRICAL SYSTEM

IGNITION

Each vehicle must have a positive action on-off switch in good working order. The switch must be located within easy reach of the driver and labeled "Ignition Switch" on – off. Ignition Battery ignition only, no magnetos. Six- or twelve-volt systems may be used regardless of year model. Any manufacturer's distributor may be used. Any VW type alternator or generator system in the stock location may be used.

BATTERIES

Battery must be relocated. Only AGM or LiFePO4 batteries are permitted, in accordance with Section 3.4.2. If installed within the driver's compartment, the battery must be securely mounted and adequately enclosed or protected to prevent electrical short circuits, damage, or leakage in the event of a rollover.

LIGHTS

All vehicles must have a minimum of two headlights, two brake lights, and two taillights. Taillights must be mounted at least 36" from the ground and be 3" in diameter. All lights must be on and working for the entire race, except headlights for day races. All vehicles must have an amber light facing the rear and hooked up to the ignition switch. This must be a fog type light with a minimum of 25 watts and a maximum of 55 watts. LED lights are ok if they are the proper size. LED lights must be at least 6" long and 2" high. All must run a three-inch (3") diameter blue or green light along with the amber light facing the rear of the vehicle. The blue Light is to identify the slower moving vehicles. This is to assist the faster moving classes to recognize a slower moving vehicle when they are approaching them.

Additional lighting is permitted. Stock headlights may be replaced with any brand so long as original mounting position is used. Pre 1967 model headlight lenses may be removed. Tail and stop lights must remain functional. Front and rear turn indicators are optional. Back up lighting may not be directed towards the engine compartment or function in any gear but reverse.

STARTERS

All vehicles must have a starter capable of turning over the engine.

FUEL SYSTEM

Safety fuel cells are required unless the original OEM fuel tank is retained in its factory mounting location, as permitted under Section 3.6.2. All fuel tanks must comply with the applicable mounting, protection, ventilation, and rollover safety requirements. Any type of fuel shut off valve allowed. Stock fuel pump must be used. Electric fuel pump may be used but must be used as a backup and routed thru the stock system. SCR22 Fuel Lines, Vents, Caps Fuel fillers may penetrate and extend through hood but must have a drain/catch boot in case of spillage in front compartment. Fuel cell filler may be in center of tank and have a maximum of a 2.25" internal diameter neck.

ENGINE, TRANSMISSION AND DRIVELINE

Engine must utilize VW series type 1, 1600cc, U.S. model sedan components and dimensions. The maximum allowable engine displacement is 1600cc as delivered from the factory. Race Engine and all Spare Engines should be verified and sealed by Tech Inspector prior to the start of the race or have it verified before the start of the next day if you change it during the event.

ENGINE CASE

Any VW type 1, 2, 3 or “universal” case is allowed. The following modifications may be made to the stock case:

(a) The case may be line bored

(b) The case may be drilled and tapped for oil and temp sending units

(c) The case may be machined for crank pulley seal

(d) Case savers may be installed

(e) Cylinder seating surface may be machined

(f) Oil galleries may be enlarged to 10mm

(g) Threaded oil gallery plugs allowed

(h) oil squirters ok

(i) case may be full flowed

OIL PUMP

Any oil pump is allowed. No deep sumps, dry sumps, or sump alterations. Windage trays allowed. Any oil bypass piston and spring allowed. No accusump systems allowed.

FUEL PUMP

Stock fuel pump must be used. Electric fuel pump may be used but must be used as a backup and routed thru the stock system. Any fuel filter and pressure regulators may be used.

PISTONS

Pistons must be stock 3 ring only. Any piston and cylinders if original stock dimensions are maintained. Any type of wrist pin keepers. Piston assemblies may be balanced to the weight in grams of the lightest original non balanced piston, wrist pin, etc. Total seal rings are ok.

CONNECTING RODS

Any VW aftermarket connecting rod is allowed if the rods are stock VW length (5.393) and stock weight with a 500-gram minimum with one (1) rod untouched. No polishing or profiling of rods.

CRANKSHAFT

Crankshaft must be stock VW. Crankshaft may be balanced. Maximum journal size is limited to .030” undersize. No polishing or lightening. Offset grinding allowed max 69.5mm. Any gear is allowed. Any engine bearing is allowed if stock dimensions are maintained. Power pulleys are allowed. Pulley may be balanced. Sand seals ok. Any VW flywheel may be lightened and balanced No aluminum flywheels. Any clutch disk and pressure plate but must retain stock VW diameter.

HEADS

Heads must be U.S sedan stock single port or dual port or their equivalent. Only dual port heads with the following numbers will be allowed. 040101375 2, 040101375 13, 040101375 19 or stock OEM heads will be allowed. Heads may be fly cut for clean-up. No porting or polishing. Stock intake 34mm original equipment center section or its replacement. A 1” by 1.5” long by ½ inch tube may be welded 2 inches below the carb flange. A minimum of material may be removed from the end of the tube for clearance. A 1 5/8 X 2” long slip tube may be welded to the end of the runners for use of better hose connection. End castings must be original equipment VW, with the VW logo and part numbers. Balance slot may be welded closed. Vacuum hole may be plugged. A 34mm to 30mm carb adapter must be used.

CAMSHAFT, LIFTERS, VALVES, ROCKER ARMS

Any camshaft, gear, valve springs, valve spring retainers, and lifters are allowed. Valve guide may be steel, bronze, or cast iron. No grinding or polishing in the port Any camshaft, gear, valve spring retainers, lifters are allowed. Beehive springs allowed. Valve spring seat diameter in head must remain stock. May use any valve but must be stock 45 degrees and stock dimensions and 8mm stem size. no titanium valves allowed. including valve guide must use stock VW 1600 rocker arms. The rocker arms may be resurfaced to permit the use of swivel feet. No other grinding or changes may be made to the rocker arms. No roller or needle bearings will be allowed as part of the camshaft or as an interface between the rocker arms and the camshaft. Any push rods and push rod tubes. Any valve adj screws. Clips on rocker arms may be wire tied. Rocker assemblies may be subject to post race inspection.

FAN SHROUD

Must use stock VW fan shroud. Heater tubes optional.

CARBURETOR

Air cleaner location is optional and may be of any manufacturer.

Stock VW carb 30 pict 1, 2, 3 or the solex h-30-pic replacement must be used. Maximum venturi size is 24.10mm. Velocity stacks may be used as long as they are not bonded to the carburetor. No internal modifications are allowed. This includes no removing of parts, no grinding, polishing, or filing. Intake manifolds must be stock. The cutting of manifolds to compensate for head milling is allowed but rewelding will not be allowed. No chemical milling of manifold or carburetor. Choke housing may be removed. The stock float bowl vent may be plugged and relocated. Any air and main jet may be used

LOW COMPRESSION ENGINE OPTION

1600cc maximum displacement and 8 to 1 compression ratio, must use same heads as high compression engine with same valve size and no porting at all. Stock VW end castings with VW part numbers must be used, no polishing allowed. An EMPI or WEBER 40 or 44 idf carb may be used and tube style intake manifold, No Plenum Manifolds allowed. Must use a maximum 26mm venturi. This is a pump gas only engine option with a maximum of 91 octane. Race Engine and all Spare Engines should be verified and sealed by Tech Inspector prior to the start of the race or have it verified before the start of the next day if you change it during the event.

TRANSMISSION

Type 1 bug 4 speed transaxle only. Heavy duty side plate and differential allowed. 8.33 (4.12) ring and pinion only. Stock VW 1st, 2nd, 3rd, 4th gears only, no close ratio gears allowed. Axle over tubes is not allowed. Other internal modifications are optional. Rear transaxle mounts may be supported by a maximum of two vertical straps of .025” x 1” dimension. Adjustable straps are optional. Any gearshift lever allowed. Shift tube must be inside tunnel. Any type 1, 2 or 181 stub axle and any VW cv joint. Oversize bolts ok.

THROTTLES

Stock pedals with no other modifications are allowed.

EXHAUST

Any exhaust system may be used.

FLUID COOLERS

Any manufacturer’s oil cooler is allowed with the location optional. Full flow systems ok.

No deep sumps or dry sump will be allowed. Late model housing approved.

7 Appendix A – Change History

Version 1.0

November 20, 2026

Initial Release