



January, 2012 – Version 1

NASA Spec Z

Official National Rules

1 Definition and Claim

The NASA Spec Z class is an affordable racing series, primarily focused on road racing, and shall function as an advertising and marketing tool for the series sponsors, the independent sponsors of each team, as well as the official sanctioning body of the series. The trade name, “NASA Spec Z,” and these rules are the property of the National Auto Sport Association, Incorporated ® located at P.O. Box 21555, Richmond, CA 94820; 510-232-NASA (6272).

2 Intent

The intent of these rules is to provide mandates to ensure that all vehicles are constructed and modified within clearly established limits, so as to ensure an even platform, in which a contest of driving skill may provide the most talented drivers with great rewards.

3 Purpose

The purpose of this series is to provide an avenue to promote sponsor brand awareness on a national scale. Additionally, this series should provide a stage to showcase driving talent, in hopes that the most talented drivers will advance to even higher-level professional series.

4 Format

Modifications, addition or removal of parts are not allowed, unless specified or approved in these rules. Additional modifications are not permitted. These rules are not intended as guidelines; rather they shall serve as the national set of rules, and must be strictly followed. Each NASA Region is responsible for ensuring that all competitors running in the corresponding regional championship conform to these rules. Replacement parts not specified by these rules must be OEM or the exact equivalent. Plainly put, if these rules do not state a modification is permitted, it's not!

5 Eligible Manufacturers

Nissan Motor Corporation is the only manufacturer of models that are legal for this series. However, other companies, including Nismo, which should be considered a separate company from Nissan Motor Corporation, may manufacture some legal and/ or required parts and components.

6 Eligible Models

Year	Make	Model	Motor	Note	Weight (lb)
03-04	Nissan	350Z	VQ35DE		3100
05-06	Nissan	350Z	VQ35DE		3175
07-08	Nissan	350Z	VQ35HR		3300

7 Sanctioning Body

The NASA Spec Z series is sanctioned by the National Auto Sport Association (NASA). All events are governed by these rules, applicable addendums, prima fascia rules, as well as those found in the latest version of the NASA *Club Codes and Regulations* © (CCR). All decisions made by the series administration are final, except under certain conditions, as specified by the CCR.

8 Safety

8.1 General

a) All safety standards not specified herein must conform to the NASA Club Codes and Regulations (CCR). Where conflicts are found between the CCR and these rules, these rules must supersede the conflicting rules found in the CCR. However, in the interest of safety, any participant that determines a conflict exists, must immediately report it to the series administration, for clarification.

8.2 Class Identification Markings

a) All class vehicles must carry the required Nissan Motorsports decals outlined in the Nissan Motorsports Contingency program information.

9 Measurements

9.1 Specified Measurement

a) Whenever the manufacturer specifications or these rules do not specify a measurement, the common average measurement will be used. This common average measurement must be determined by either 1) calculating a mean average of at least three measurements from the corresponding parts found on other vehicles, or 2) the series technical administrator will make a determination based on any other reasonable method, providing that the data, system, or logic that was used be made known to the public. The second option is only permitted under circumstances where option number one becomes impractical, as determined by the series Race Director.

9.2 Tolerances

a) All published measurements infer a tolerance of +/- one-half (1/2) of the last specified decimal place. All rounding will be done to the nearest decimal place that is specified by the manufacture or these rules. In a case where a measurement falls exactly on the halfway mark, it must be rounded up or down in favor of the competitor. This section does not apply whenever the manufacturer specifications, or these rules, specify a tolerance.

10 Weight

Minimum - Vehicle

The 2012 minimum weights are subject to change amid the season to adjust for competition.

Additional Weight - Ballast

Additional weight may be added to the vehicle providing that all of the following conditions are met:

- Additional weight must serve no other purpose than to increase the weight of the vehicle. This additional weight shall be known as "ballast."
- Ballast must be made of solid metal, and must be installed securely.
- All pieces of ballast must be bolted within the passenger compartment, through the floor pan on the passenger side of the cockpit.

11 Engine

11.1 General

- a) All engines, components, and parts must have been offered for sale in a Nissan 350Z, sold by a dealer in the United States of America unless otherwise specified in these rules.
- b) All engines and their internal components must remain stock, except as provided by these rules, and within factory specified tolerances unless otherwise specified below.

11.2 Balancing and Lightening

- a) Lightening of engine parts and engine components is not permitted. Balancing of Flywheel is permitted, but material may only be removed for the purpose of balancing that item.

11.3 Cooling System

- a) Ethylene glycol-based anti-freeze is not permitted. Other additives, such as Redline Water Wetter, are permitted.

11.3.1 Radiator

- a) Any radiator may be used, provided that it mounts in the stock location, without any modification of any part of the stock mounting location that is integral to the body. Any additional open areas or holes created by use of a non-OEM radiator may be blocked off, but under no circumstance shall the open areas or holes be used for supplying the air filter with additional air.

11.3.2 Thermostat

- a) Thermostats are optional and unrestricted, providing that they serve no other function than to control coolant flow from the engine to the radiator.

11.3.3 Heater Core

- a) Heater core may be bypassed, but not removed or modified in any way. The rubber hoses that supply water to the heater core may be shortened or eliminated.

11.4 Camshafts

- a) Camshafts shall comply with the OEM Specifications. OEM cams are required. Cams ground from blanks or reground cams are not acceptable. No mixing of cams between engine models. Cams must be installed in their original location.

11.5 Engine Modifications

a. General

- 1) No modifications to this engine are allowed, except where specifically authorized within these rules. This includes, but is not limited to, all fuel injection and engine management components, as well as electrical, cooling, and lubrication systems. All systems are subject to test procedures and must conform to OEM specifications as stated in the Nissan factory service manual.
- 2) Permitted engine maintenance includes the replacement, but not modification, of external engine and engine systems parts. No balancing, blue printing, lightening, polishing, or other modification of moving parts of the engine is permitted. All parts in the engine must be stock Nissan OEM parts unless specified in this rule set. For all Nissan part numbers in these specifications, superseding part numbers are considered equivalent.
- 3) Cast iron cylinder liners (sleeves) may be installed to restore damaged or worn cylinder bores to the original dimension. Re-boring to over size is prohibited.
- 4) Nissan OEM standard size pistons must be used. The use of oversize pistons is not permitted. No modification of the piston is permitted. Modification of the piston ring end gap width is allowed.

b. Cylinder Head

- 1) The cylinder head must not be ported, polished, or machined unless specified within these rules. The original casting must not be modified in any way or polished unless specified below.
- 2) Valve face where it mates to the seat may be machined and valve seats may be machined for the purposes of a valve job. Valves may only be replaced with the exact OEM equivalent, with exception of valve job.

c. Valves

OEM valves must be as supplied by Nissan. Valve location or angle must not be moved. Reshaping of the valves is strictly prohibited. Valve guides may be replaced provided the position of the valve is not changed and the replacement guides are Nissan OEM parts. Valve stem installed height must be per the Nissan factory service manual: Valve stem seals must be Nissan OEM parts.

i. Compression Ratio

Maximum allowed compression ratios are shown in the following table:

Model Years	Compression Ratio
03-06	10.3:1
07-09	10.6:1

Carbon may be removed from combustion chambers, valves, and pistons.

12 ECU / Induction / Exhaust / Fuel Systems

12.1 Induction

a) All vehicles must use unmodified stock air filter housing. Air filter element is unrestricted, but must be utilized.

12.4 Fuel Filler

a) Fuel filler trap door and restrictor plate in the filler neck may be removed.

12.5 Ignition System

a) Any spark plug may be used
b) Initial ignition timing may be set by ECU only.

12.6 Exhaust System

a) Replacement of stock Catalytic Converter system is permitted.
b) Replacement of OEM exhaust system is permitted and unrestricted providing it exists aft of the rear sub-frame. NISMO Cat-back system is also permitted.
c) Stock exhaust heat shielding may be removed.

12.8 Fuel

a) Fuel usage is restricted to unleaded gasoline commonly found at track side retail pumping. Octane is limited to a maximum of 100 (R+M)/2 as labeled on the pump. Race fuels such as, but not limited to, ERC brand are prohibited. All fuel additives are illegal, per the CCR. Note- event supplemental rules supersede this section.

12.9 ECU

a) Factory ECU must be retained. Replacement or "piggy back" systems are not permitted. "Reflashing" of factory ECU is permitted. Refer to Appendix A for recommended Nissan Part.

13 Transmission / Clutch & Flywheel / Differential

13.1 Transmission

- a) Transmission must be unmodified.

13.2 Clutch System and Flywheel

- a) Pressure plate and clutch disk is unrestricted provided the unit is a single disc clutch system weighing no less than 14.5lbs for the pressure plate, and 3.2lbs for the clutch disc.
- b) NISMO Flywheel is permitted in place of OEM unit.

13.2 Differential

- a) Differential may be replaced with Nissan Motorsports unit, 38420-SS370. Refer to Appendix A for recommended Nissan Part.
- b) OEM final drive must be retained.
- c) Differential cover may be replaced with Nissan Motorsports unit. Refer to Appendix A for recommended Nissan Part.

14 Suspension Components

14.1 Suspension

- a) Suspension modifications are limited to the addition of the Nissan Motorsports "Spec 350Z kit" and those modifications detailed in this area.

Nissan Motorsports Spec 350Z kit

The following is a breakdown of components supplied within these kits. All parts numbers are Nissan Motorsports parts numbers. No substitution of parts is allowed. The kits must be used in their **entirety**.

Shocks

- Front Left Shock Part# E6110-SZ350
- Front Right Shock Part# E6111-SZ350
- Rear Shock Part# E6210-SZ350

Springs

- Front Spring Part# 54010-SZ350
- Rear Spring Part# 55020-SZ350

Coil-Over kit

- Front/Rear Part# 5600S-SZ350

Anti-Roll Bars

- Front Progress Part# 54611-SZ350
- Rear Program Part# 56230-SZ350

14.2 Camber

- a) front and rear camber is unrestricted provided it is within the normal limits of adjustment. No modification to increase or decrease camber is allowed.

14.3 Ride Height

- b) Ride height is unrestricted providing that no metal part of the vehicle touches the ground so as to be hazardous in the opinion of the Race Director.

15 Steering

- a) Steering lock may be removed.
- b) Optional OEM Power Steering Cooling system may be added to any vehicle not originally equipped. Larger NISMO power steering cooler may be used in place of OEM cooler.

16 Wheel and Tires

16.1 Wheels

- a) Any eighteen (18.00) inch diameter rim, with a maximum width of nine (9.00) inches front, and a maximum width of ten (10.00) inches rear may be used.
- b) No wheel permitted for competition use can weigh less than eighteen point five (18.50) pounds.
- c) Wheels must be one piece. (i.e. No multi piece bolted, riveted, or welded wheels.)
- d) Aftermarket wheel studs, lug nuts, and wheel spacers are permitted. If spacers are used they shall be no greater than 13mm and equal per axle. Refer to Appendix A for recommended Nissan Part(s).

16.2 Tires

- a) The 275/35R18 BFGoodrich g-Force™ R1™ tire is the specified tire for the series. Optionally, the 275/35R18 BFGoodrich g-Force T/A™ KDW may be used for wet weather competition.

17 Brake System

17.1 Brake System

- a) Brake pads are unrestricted.
- b) Brake rotors must be the same type, material, and dimensions as OEM. Brake rotors from alternate companies may be used. Brake rotors may be cryogenically treated.
- c) Steel braided brake lines may be used.
- d) Disc brake backing plates may be removed.
- e) The emergency brake level and/or cables and associated must remain functional.
- f) Anti-lock braking systems (ABS) may be disabled.

18 Appearance

18.1 Exterior

- a) Fenders and wheel openings must remain unmodified, except that rolling or flattening of inner fender lip for tire clearance is permitted.
- b) Hood and inner fender plastic trim are optional and may be removed.
- c) Any mirrors may be used or removed.
- d) Any paint scheme / colors may be applied.

- e) Body molding, antennas, license plates, license plate frames, license plate lights, and insignias and emblems may be removed.
- f) Windshield clips and rear window straps are permitted and recommended.
- g) Hood clips are permitted. Stock hood latches may be disabled or removed.
- h) Horn and associated wiring may be removed.
- i) Any OEM factory exterior body components are permitted. Please refer to appendix A for recommended parts.

18.2 Interior

- a) The driver's seat must be replaced with a seat suitable for competition, including a racing-type bucket seat. Factory seat tracks may be modified, reinforced or removed to facilitate replacement mountings provided they perform no other function. All driver seats must conform to the CCR.
- b) The transmission tunnel may be modified for the purpose of installing a competition driver seat. The floor pan must remain in its original position
- c) Gauges may be added, replaced, or removed. They may be installed in the original instrument(s) location using a mounting plate(s) or any other location using a secure method of attachment.
- d) Other than modifications made to mount instruments and provide for roll cage installation, the remainder of the dash board and instrument panel must remain intact.
- e) Any steering wheel and attachments may be used except wood rimmed type steering wheels.
- f) Any shift knob may be used.
- g) The air conditioning system may be removed. Modification or removal of the heater core and blower fan assembly is not permitted.
- h) The carpet, center console, cargo bins, OEM seat belts, radio system, headliner, dome lights, and grab handles may be removed.
- i) All insulating material may be removed from the interior and trunk.
- j) Other than to provide for the installation of required safety equipment or other authorized modifications, no other driver/passenger compartment alterations or gutting is permitted.
- k) Removal; or substitution of driver compartment panels is not permitted.
- l) Any removable covers used to cover spare tires, tools, bins, etc. may be removed along with attaching hardware and brackets.
- m) Carpets, mats and their insulating or attaching materials may be removed from the floor and recesses of the cargo/spare tire area.
- n) Ducting may be added to provide fresh air to the driver/passenger compartment, providing that no modifications of windows and body structure are made to accommodate this addition.
- o) The passenger seats, mounting hardware, and seat belts may be removed. Spare tire and tools must be removed from trunk.
- p) The foot pedals (i.e. brake, clutch, gas) may be modified for driver comfort and accessibility. Additionally, modifications for strengthening are allowed provided that those modifications serve no other purpose.
- q) The door window glass, window operating mechanism, and inside door latch/lock operating mechanism may be removed and the inner door structural panel may be modified, but not removed. The stock side impact beam and the outside door latch/lock operating mechanism shall not be removed or modified. This gutting of the door shall only be made if roll cage incorporates NASCAR-style side protection extending into the door.

19 NASA National Championship Event

- a) Nissan Contingency Decals following the Nissan Contingency Guidelines are required on each Spec-Z competing at the event.
- b) **NASA will impose a maximum horse power limit for each Spec-Z engine classification.**
- **Horsepower readings will be measured utilizing a Dynojet Dynamometer with the SAE correction factor and smoothing factor of "5".**
 - **NASA may impound all competitors and require certain competitors to report to the dyno located trackside for dynojet dynamometer testing immediately following any on track session.**
 - **Any competitor found to be competing over the allowed maximum horse power limit for their particular engine classification will be disqualified from their previous session and assessed an additional 15lbs for each horse power they are over the maximum limit for the duration of the event.**
 - **NASA will also utilize Traqmate data acquisition systems to measure real time horse power numbers during competition to supplement the trackside dynamometer testing.**

Spec-Z competitors planning to compete at the National Championship event should refer to the spreadsheet below to find their specific maximum horsepower limit.

Year	Make	Model	Motor	Note	Horsepower
03-04	Nissan	350Z	VQ35DE		258
05-06	Nissan	350Z	VQ35DE		265
07-08	Nissan	350Z	VQ35HR		275

Appendix A

Recommended Nissan Performance Parts for the preparation of a NASA Spec Z competition vehicle.

Part	Detail	Note	Motorsports part
ECM			
OEM only	Reflash allowed	Reflash maps available from Nissan Motorsports	
Exhaust			
NISMO Cat back	Free		20100-RSZ35
Cooling			
Radiator	Free	OEM dimensions in height and width	21400-CDZ33
Oil Cooler	Free		21300-RSZ33

Drive train			
OEM Clutch disc	Free single disc	OEM dimension	30100-CD019
OEM Pressure Plate	Free single disc	OEM dimension	32010-CD020
NISMO Flywheel	OEM or NISMO		12310-RSZ30
Differential finned Aluminum cover	OEM final drive	Motorsports rear cover allowed	38351-350DK
Limited Slip Unit	Spec	Wave Trac	38420-SS370
Wheel			
wheel stud	Spec	NISMO 60mm (2 needed)	40222-RS045
Lug nut	Spec	Motorsport open end (20 needed)	40222-SS000
Suspension			
Coil over kit	Spec Front and Rear	KW Double adj	5600S-SZ350
Sway Bar Front	Spec Front and Rear	Progress special for Motorsports	54611-SZ350
Sway Bar Rear	Spec Front and Rear	Progress special for Motorsports	56230-SZ350
RF Shock		Replacement Shock	E6110-SZ350
LF Shock		Replacement Shock	E6111-SZ350
Rear Shock		Replacement Shock	E6210-SZ350
Front Spring		Replacement Spring	54010-SZ350
Rear Spring		Replacement Spring	55020-SZ350
Brakes			
Brake lines	Stainless steel		46200-23Z33
Pads	Free	Front	41060-Z33RP
		Rear	44060-Z33RP
Body			
All Exterior Body Panels	Must be OEM	All interchange OK	NISMO Z parts
Front Bumper Cover			FBM22-1A45H
Front lip			F2026-1A44A
RH side skirt		Fits on top of OEM side skirt	G6850-1A44H
LH side skirt		Fits on top of OEM side skirt	G6851-1A44H
Rear bumper cover			HEM22-1A45H
Rear cover, lower			H50B2-1A44A
Rear cover, guard			H5050-1A44A
Rear wing upper			K6031-1A44H
Rear wing center			K6074-1A44H
Rear wing lower			K6032-1A44H
Rear wing bracket			K60A0-1A44H