



# Spec Z

## Official 2024 National Rules

(Rules subject to change)

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(Note: Latest revisions are in **blue** font, and all previous revisions are in **green**)

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### **1. Introduction**

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 . 7065 W Ann Rd. #130 - 432 Las Vegas, NV 89130.  
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. Spec Z is a restricted class. Therefore no modifications/changes are allowed unless specifically outlined in these rules.

**3. Sanctioning Body**

SpecZ is supported and sanctioned by the National Auto Sport Association (NASA). All race events are governed by the rules set forth by the Class/Series Directors and NASA officials. All competitors agree to also abide by the rules set forth in NASA’s current Club Codes and Regulations (NASA CCR) and any supplemental rules issued by the Class/Series Directors.

**4. Vehicle Specifications**

**4.1 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.

**4.2 Eligible Models/Weight/HP**

Any Model Nissan 350Z is eligible for competition in the Spec Z series. Any model 350Z may compete as delivered from the factory, given all CCR safety requirements are met. Additional components that were provided on the factory NISMO version of the 350Z may be added to any other model of 350Z excluding engine components. This includes brake components and exterior body panels.

Year	Make	Model	Motor	Note	Weight (lb)
03 - 04	Nissan	350Z	VQ35DE	Engine must be intake only variable timing controlled	3100
05 - 06	Nissan	350Z	VQ35DE	Engine must be intake and exhaust variable timing controlled	3175
07 - 08	Nissan	350Z	VQ35HR	Any dual throttle body engine car must run as	3325

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### 4.3 Horsepower Limits

4.3.1 NASA will impose a maximum horsepower limit for each Spec-Z engine classification.

4.3.2 Horsepower readings will be measured utilizing a Dynojet Dyno with the SAE correction factor and smoothing factor of “5”.

4.3.2.1 All dyno pulls will be made in 4th gear.

4.3.2.2 During an official dyno test, the car must be fitted with the spec tires and rims used on the car in the previous session with the rear tire pressures set at 32 psi.

4.3.2.3 Dyno runs shall be made with water temperature in the normal operating range of 165F-210F and drivetrain fluids up to a normal running temperature.

4.3.2.4 All dyno pulls will be made with the hood opened.

4.3.3 NASA may impound all competitors and require certain competitors to report to the dyno located trackside for Dynojet Dyno testing immediately following any on track session.

4.3.4 Any competitor found to be competing over the allowed maximum horsepower limit for their particular engine classification will be disqualified from their previous session unless they are found to have an additional 20lbs for each horsepower they are over the maximum limit for the duration of the event.

4.3.5 NASA may also utilize data acquisition systems to measure real time acceleration rates during competition to supplement the trackside dyno testing. [A car with anomalous data readings may be required to provide an updated dyno sheet at the race directors discretion.](#) Spec-Z competitors should refer to the table below to find their specific maximum horsepower limit for both regional and championship events.

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

## 5. Safety

5.1 Gusseting of the a-pillar to the front hoop of the roll cage is allowed.

## 6. Modifications

### 6.1 Engine

#### 6.1.1 General

6.1.1.1 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.

6.1.1.2 For all Nissan part numbers in these specifications, superseding part numbers are considered equivalent.

6.1.1.3 No modifications to the engine are allowed, except provided by these rules. All engines and their internal components must remain stock Nissan OEM and within factory specified tolerances. No balancing, over-boring, blue printing, lightening, polishing, or other modification of moving parts of the engine is permitted.

6.1.1.4 Cast iron cylinder liners (sleeves) may be installed to restore damaged or worn cylinder bores to the original dimension.

6.1.1.5 Balancing of Flywheel is permitted, but material may only be removed for the purpose of balancing that item.

6.1.1.6 DE Engines may omit the upper idler pulley and belt with a shorter belt, OEM part number 11720-4P10A or equivalent.

6.1.1.7 Maximum allowed compression ratios are shown in the following table: Model Years Compression Ratio 03-06 10.3:1 07-09 10.6:1

6.1.1.8 PCV venting using "Catch Can" can be used either venting to atmosphere or back into the intake manifold at the existing factory inlet.

#### 6.1.1.9 USDM or equivalent JDM 350Z replacement engines may be used

### 6.1.2 Cylinder Head

6.1.2.1 The cylinder head must not be modified, ported, polished, or machined unless specified within these rules.

6.1.2.2 Valve face where it mates to the seat and valve seats may be machined for the purposes of a valve job.

6.1.2.3 Valves and stem seals may only be replaced with OEM Nissan parts. 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 specifications.

6.1.2.4 Camshafts must be OEM for year of engine being used and shall not be replaced or modified outside of stock specifications. Cams ground from blanks or reground cams are not acceptable. No mixing of cams between engine models.

### 6.1.3 Cooling System

6.1.3.1 Oil cooler, oil filter, remote filter mount, lines and adapters are free. OEM components are also legal.

6.1.3.2 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.

6.1.3.2.1 Ducting to improve air flow through radiator for purposes of cooling may be added. Ducting CANNOT improve air flow into air filters.

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

6.1.3.4 Heater core may be bypassed or removed. The rubber hoses that supply water to the heater core may be shortened or eliminated.

6.1.3.5 The center support of the factory radiator core support may be deleted to allow for improved air flow into the radiator.

6.1.3.6 Engine coolant circuits related to heater core, factory oil/water exchanger, thermostat bypass and throttle valves may be deleted or bypassed.

6.1.3.7 The factory radiator coolant overflow bottle can be relocated or replaced with aftermarket version which can perform no other function.

## 6.2 ECU/Induction/Exhaust/Fuel Systems

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

6.2.2 Any spark plug may be used

6.2.3 Initial ignition timing may be set by ECU only.

6.2.4 Battery size and type is unrestricted, but must be securely mounted in the stock location and must be capable of starting the car. Relocation of battery outside of factory battery compartment is not permitted.

6.2.5 Factory ECU must be retained. "Reflashing" of factory ECU is permitted. Replacement or "piggy back" systems are not permitted. Multiple tuned ECU maps are not allowed. No switching of maps allowed via Cruise Control circuitry or other switching device. Only 1 "tuned" ECU map allowed.

6.2.6 Replacement of OEM exhaust system downstream from factory exhaust manifold is permitted and unrestricted providing it exits aft of the rear subframe. Exhaust manifolds must match the year range of the engine installed.

6.2.7 Stock exhaust heat shielding may be removed.

6.2.8 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.

6.2.9 The EVAP system may be disabled or completely removed.

6.2.10 Any submersible fuel pump and fuel line may be added to the left side of the tank for the sole purpose of transferring fuel from the left side of the fuel tank to the right side of the fuel tank to prevent fuel pump starvation. This pump must not in any way

pressurize the existing fuel system. The installation must be professional, be fully sealed, and have no exposed wiring.

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

6.2.12 Fuel injectors, rails, feed/return lines, regulator, and dampener must remain OEM and unmodified.

6.2.13 Engine mounts may be replaced with any aftermarket mounts that are not solid metal.

6.2.14 For the VQ35DE engine, replacement of the Rear Water Coolant Bypass with the "OEM Pathfinder Upgrade Modification Kit" is permissible and can help with known cylinder head cooling issues. Must use the OEM Pathfinder rear coolant bypass and block water outlet adapter.

### **6.3 Transmission/Clutch & Flywheel/Differential**

6.3.1 Any limited slip differential may be used. OEM final drive gear ratio must be retained for the matching transmission type: 3.538:1 for a manual transmission and 3.357:1 for an automatic transmission

6.3.2 Transmission must be unmodified except for the Clutch Arm Pivot Ball which may be replaced with any ferrous material in the same shape and size as OEM.

6.3.3 Pressure plate and clutch disk are unrestricted provided the unit is a single disc clutch system weighing no less than 13.5lbs for the pressure plate, and 3.5lbs for the clutch disc.

6.3.4 OEM or NISMO finned differential cover may be used. See Appendix A for part number

6.3.5 Differential cooler may be added. Size and location are unrestricted.

6.3.6 The OEM rubber transmission and differential bushings may be replaced with any non-metallic bushings. No bushing may alter original suspension geometry.

6.3.7 OEM, NISMO or aftermarket Single Mass Flywheels weighing no less than 18.5lbs are permitted.

6.3.8 2006-2008 Infiniti M35 rear wheel bearings may be used in place of OEM. 370Z axles and rear wheel bearings may also be used.

6.3.9 Aftermarket Concentric Slave Cylinders may be used on cars with the VQ35HR engine

## 6.4 Suspension Components

### 6.4.1 Suspension

6.4.1.1 See Appendix A for permitted shocks, springs, sway bars, and bushings.

6.4.1.2 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.

6.4.1.3 Front upper control arms (A-Arms) are open and may be replaced with aftermarket components for the purpose of adjusting front wheel camber. Factory mounting positions must be retained.

6.4.1.4 Rear camber is unrestricted provided it is within the limits of adjustment using the stock OEM arms only.

6.4.1.5 A single 2 (two) inch circular hole may be cut in the rear strut tower brace directly above the rear shock for the single purpose of accessing the rear shock rebound adjuster.

6.4.1.6 A single 20mm diameter hole may be cut in the front strut tower brace for the single purpose of making the install of the spec coil over kit easier.

6.4.1.7 Suspension bushings may be any non-metallic material.

6.4.1.8 Rear subframe bushings may be of any material. NISMO 55400-SSBZ3 is recommended.

6.4.1.9 Front and rear sway bar links may be replaced with adjustable aftermarket components. Factory mounting locations must be retained.

6.4.1.10 Aftermarket rear camber bolts that allow for increased range of camber and toe adjustment are allowed

## 6.5 Steering

6.5.1 Optional OEM Power Steering Cooling system may be added to any vehicle not originally equipped. Larger NISMO or other aftermarket power steering cooler may be used in place of OEM cooler.

6.5.2 Power steering hoses and reservoir may be replaced with aftermarket equivalents, but must stay within the OEM hose/reservoirs size, length, location and capacity.

## 6.6 Wheels and Tires

6.6.1 Any eighteen (18.00) inch diameter rim, with a maximum width of ten (10.00) inches may be used on the front or rear axle positions.

6.6.2 Wheels permitted for competition use can not weigh less than eighteen point four (18.40) pounds.

6.6.3 Wheels must be one piece. (i.e. No multi piece bolted, riveted, or welded wheels).

6.6.4 Aftermarket wheel studs, lug nuts, and wheel spacers are permitted.

6.6.5 Toyo RR, size 295/30/ZR18, is the spec tire for dry weather use.

6.6.6 Toyo RA1, size 275/35/ZR18, is allowed for wet weather use.

## 6.7 Brake System

6.7.1 Brake pads are unrestricted.

6.7.2 Brake rotors must be one piece and constructed of the same material as OEM. Aftermarket brake rotors may be used. Rotors may be cryogenically treated. Slotted rotors are allowed.

6.7.3 Steel braided brake lines may be used.

6.7.4 Disc brake backing plates may be removed.

6.7.5 The emergency brake system components may be removed

6.7.6 Anti-lock braking systems (ABS) may be disabled.

6.7.7 Manual brake bias valve is permitted only in the event that ABS system is disabled.

6.7.8 Two holes no larger than 40 square inches each may be cut in the front bumper cover for the sole purpose of routing cooling air to the front braking system.

6.7.9 OEM, NISMO, or 370Z/Infiniti Sport Akebono brakes are allowed and can be mixed front and rear.

## 6.8 Appearance

### 6.8.1 Exterior

6.8.1.1 See Appendix A for permitted NISMO exterior body components. **As many OEM components are no longer available, aftermarket replicas of OEM parts may be used.**

6.8.1.2 Nissan Contingency Decals following the Nissan Contingency Guidelines are required on each Spec-Z competing at any regional or national event.

6.8.1.3 Fenders and wheel openings must remain unmodified, except that rolling or flattening of the inner fender lip for tire clearance is permitted.

6.8.1.4 Hood and inner fender plastic trim are optional and may be removed.

6.8.1.5 Louvered style hood vents not exceeding a total of 400 square inches in total area are permitted. Inner hood structure may be removed only in areas that facilitate installation of the vent and mounting hardware.

6.8.1.6 Any mirrors may be used or removed.

6.8.1.7 Front/Rear wipers with motors and hardware, license plates with frames and lights, body molding, horns, antenna, and air bag sensors/wiring may be removed.

6.8.1.8 Windshield clips and rear window straps are permitted.

6.8.1.9 Hood clips are permitted. Stock hood latches may be disabled or removed.

**6.8.1.10 Aftermarket aluminum lower engine covers for the 350Z from Z1 Motorsports or zspeed performance, or a functional replica may be used, and must serve no other purpose than the OEM part**

### 6.8.2 Interior

6.8.2.1 The transmission tunnel may be modified for the purpose of installing a competition driver seat. The floor pan must remain in its original position

6.8.2.2 Gauges may be added, replaced, or removed.

6.8.2.3 Any steering wheel and attachments may be used except wood rimmed type steering wheels.

6.8.2.4 Any shift knob may be used.

6.8.2.5 Other than modifications made to mount instruments and provide for roll cage installation, the remainder of the dashboard and instrument panel must remain intact.

6.8.2.6 The air conditioning system, carpet, all insulation material, center console, cargo bins, OEM seat belts, air bags, radio system, headliner, dome lights, grab handles, spare tire, tools, removable interior panels, and passenger seat may be removed.

6.8.2.7 Rear speaker Main Box 74552-CD000, center support bracket 74554- CD000, center support connecting bracket 74554-CD010, side brackets 766A6-CD000 and 766A7-CD000 may be removed.

6.8.2.8 Removal or substitution of driver compartment panels is not permitted.

6.8.2.9 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.

6.8.2.10 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.

6.8.2.11 The door window glass, window operating mechanism, and inside door latch/lock operating mechanism may be removed. The outside door latch/lock operating mechanism shall not be removed or modified. The inner door structure may be removed. The stock side impact beam may be removed or modified if the roll cage incorporates NASCAR style side protection extending into the door.

6.8.2.12 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.

## 7. **Class Directors, Social Media**

Facebook group: NASA SpecZ

John Benton: [SpecZ National Director](#)

Email: [jwbenton@gmail.com](mailto:jwbenton@gmail.com)

## APPENDIX A

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

For both OEM and NISMO parts ordering, contact Nissan Motorsports at [nmc.race@nissan-usa.com](mailto:nmc.race@nissan-usa.com) or 888-833-3225.

Part	Detail	Note	Motorsports part
<b>Drive train</b>			
NISMO Flywheel	OEM or NISMO	Only fits 03-06 DE Engine	12310-RSZ30
Rear Differential Cover	OEM or NISMO	Motorsports rear cover allowed	38351-350DK
Short Stub Axle	OEM	LSD equipped cars require 1 additional short stub axle, Non LSD equipped cars require 2	38200-AR011
<b>Suspension</b>			
Coil over kit	Spec Fr/Rr	KW Clubsport Double adj	NISMO 5600S-SZ350 or KW 352-85-802
Sway Bar Front	Spec Fr	Progress special for Motorsports	NISMO 54611-SZ350 or Progress 61.1542
Sway Bar Rear	Spec Rr	Progress special for Motorsports	56230-SZ350 (22mm) or

			56230-SZ350-19 (19mm) or Progress 62.1540
Sway bar link - Front		NISMO	54618-FEZ33
Sway bar link - Rear		NISMO	54618-FEZ34
Front Upper Camber/Caster arms			54525-FUAZ3
<b>Brakes</b>			
Brake Caliper		NISMO	41001-FR350
Brake lines	Stainless steel	Front	46200-23Z33
		Rear	44060-Z33RP
Front Brake Duct Kit		Front	99996-Z3350
<b>Body</b>			
All Exterior Body Panels	Must be OEM or equivalent	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
<b>NISMO Hard Rubber Suspension Bushings</b>			
Part No	Description	Needed per car	
54541-RRZ30	Front upper A arm bushing	4	
54560-RRZ30	Front lower transverse link bushing	2	
55045-RRZ30	Rear upper A arm bushing	4	
55148-RRZ30	Rear radius rod (toe link) at hub bushing	2	
55149-RRZ30	Rear radius rod (toe link) at body bushing	2	
55152-RRZ30	Rear lower link (camber link) at hub bushing	2	
55153-RRZ30	Rear lower link (camber link) at body bushing	2	
55158-RRZ30	Rear lower control arm (spring arm) bushing	2	
56218-RRZ30	Rear upper shock absorber bushing	2	