



## Honda Challenge Series Official 2018 Rules and Classifications

November, 2017 Version 20.3

### 1.1 Introduction and Series Overview

The NASA Honda Challenge Series was created to meet the needs of Honda/Acura owners looking for a series specifically tailored to accommodate a wide range of Honda and Acura vehicles and components.

The following rules are not guidelines for this class but an actual listing of the allowed and the required modifications. If these rules do not expressly state a modification is allowed, it is prohibited. No item, which is allowed, shall also perform a prohibited function. The driver is responsible for vehicle legality.

### 1.2 Rules Subject to Change

These rules are subject to change. The most up-to-date version of this document is available on the web, at [www.nasaproracing.com/rules.html](http://www.nasaproracing.com/rules.html). Rule Addendums may be published throughout the year and will be posted in the Honda Challenge sub-forum located at [www.nasaforums.com](http://www.nasaforums.com).

### 1.3 Honda Challenge Rules Committee

The rules for Honda Challenge are governed by NASA and overseen by a rules committee. The rules committee is made up of select Regional Series Leaders and a National Series Director. The primary duty of this group is to evaluate rule change requests submitted by competitors in the series. The rules committee evaluates the merits of each request and decides whether or not to implement a change. Recommendations for rule changes are submitted to NASA's National office as a suggested change to the official rules. The final decision on the suggested change(s) resides with the National Office.

### 1.4 Rule Change Request Process

Honda Challenge competitors have the right to request a change to the Series rules using the form located at [https://www.nasaproracing.com/forms/honda\\_challenge\\_rule\\_change\\_add\\_request\\_form.pdf](https://www.nasaproracing.com/forms/honda_challenge_rule_change_add_request_form.pdf). All rule change requests must be thorough, detailed, and include data to support the request. All requests shall be submitted to the competitor's Regional Director, who will review the form for completeness and accuracy, and will in turn submit the request to the Rules Committee. All requests will receive a response or requests for additional information from the Rules Committee within two weeks from the date received. Any rule not implemented will be provided with an explanation as to why it was denied. You may submit the same request at a later date with addition information and evidence.

## 2. Intent

The NASA Honda Challenge Series encourages competitors to create a combination of parts that will increase the performance, competitiveness, and appearance of the vehicle. It is the intent of the NASA Honda Challenge Series to serve as a showcase for aftermarket tuners and manufacturers, creating exposure for their products and services while providing a friendly, accommodating, and challenging environment for competitors. The series is designed to keep costs within reason by allowing limited suspension, brake, engine, and body modifications.

## 3. Sanctioning Body

The NASA Honda Challenge Series is sanctioned by the National Auto Sport Association (NASA). All events are governed by these NASA Honda Challenge Series 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 NASA Honda Challenge Series administration are final, except under certain conditions, as specified by the CCR. All competitors agree to abide by the rules set forth in the CCR and any supplemental rules issued by the Honda Challenge Series Directors.

## **4. Safety & Required Modifications – All Classes**

**4.1. General:** All safety standards not specified herein must conform to the CCR. Where conflicts are found between the CCR and these rules, these rules shall 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.

**4.2 Class Safety:** The NASA Event Director, Honda Challenge Series Directors, the Race Director, or the Chief Scrutineer, may exclude any car from competition for any item(s) that they deem to be unsafe.

**4.3 Tow Eyes:** NASA CCR-compliant tow eyes are required front and rear.

**4.4 Air Bags:** All cars equipped with air bags must either have the systems disabled or removed.

### **4.5 Sunroofs/Moonroofs:**

**4.5.1** All cars equipped with Sunroofs or Moonroofs made of glass must be either:

- a) Removed from the vehicle (in this case arm restraints required); or
- b) replaced by an acceptable covering such as sheet metal, aluminum, or composite (i.e. Lexan, carbon fiber) that is securely attached to the vehicle covering the opening, or
- c) Covered with tape on both sides of glass.

**4.5.2** All cars equipped with Sunroofs or Moonroofs made of metal must be either:

- a) Retained if additional fasteners are used to secure them to the vehicle; or
- b) Removed from the vehicle (in this case arm restraints required); or
- c) Replaced by an acceptable covering such as sheet metal, aluminum, or composite (i.e. Lexan, carbon fiber) that is securely attached to the vehicle covering the opening.

**4.6 Master Switch:** All cars shall have a CCR-compliant Master Switch and decals

### **4.7 Fuel Safety Cell:**

**4.7.1** A CCR-compliant fuel safety cell is not required but is recommended.

**4.7.2** Rear floor-pan may be modified to accommodate a fuel cell. If the fuel cell is not present, said opening must be covered with metal and sealed.

**4.8 Fire Extinguisher/Fire System:** All cars shall have a CCR-compliant fire extinguisher mounted in compliance with the CCR. A CCR-compliant onboard fire system is not required but is strongly recommended.

**4.9 Roll Cage:** All cars shall have a CCR-compliant roll cage. Additionally,

**4.9.1** Any number of additional mounting points may be used.

**4.9.2** Any number of additional tubes may be used, *even for chassis stiffening*.

**4.9.3** Any size mounting plate may be used, subject to material and minimum specifications in the CCR.

**4.9.4** Two (2) forward cage braces per side (total of four (4)) may pass through the firewall and connect at no more than two (2) mounting points in the engine compartment (i.e. strut tower or frame).

**4.9.5** Tubes may be welded at any contact point.

**4.9.6** Additional material may be used to connect roll cage tubing to chassis of car (i.e. A-pillar bar may have material welded to both itself and the A-pillar of the car).

**4.9.7** Additional spot welding and/or welding seams on the chassis is permitted.

**4.9.8** All tubes that are added shall be inspected for safety reasons. Any tube deemed to be hazardous to the driver must be removed.

**4.9.9** Factory dash bar may be replaced with roll cage tubing that is incorporated into the roll cage design provided it meets or exceeds minimum tubing size and wall thickness requirements of main hoop.

### **4.10 Door Safety Bars:**

**4.10.1** The driver side OEM side impact beam may not be removed or modified unless NASCAR-style bars (or other approved design as defined in CCR) *which extend to the outer door skin* are present.

**4.10.2** The passenger side OEM side impact beam may not be removed unless two (2) bars are utilized in the cage design (i.e. two (2) horizontal bars or X design).

**4.10.3** It is highly recommended using a NASCAR style door bar for adequate side impact protection. In any case, *CCR-compliant roll cage door protection is required on both sides of the car.*

**4.11 Door Glass:**

**4.11.1** The driver and passenger side window glass, window operating mechanism, inner door panel, inner door sheet metal, and interior door latch assemblies may be removed.

**4.11.2** If retained, driver and/or passenger side door glass must be covered with a protective panel (stock panel is permitted).

**4.11.3** In the case of 4 door vehicles, driver and passenger rear door window glass, window operating mechanism, inner door panel, impact beam, Inner door sheet metal, and interior door latch assemblies may be removed.

**4.12 Prohibited Items**

**4.12.1** Nitrous Oxide Systems

**4.12.2** Forced Induction (turbochargers, superchargers, ram air, etc.), except as noted herein

**4.12.3** Dry Sump Engine Oiling Systems

**4.12.4** Traction Control

**5. Vehicle Classification**

**5.1 Classes**

**5.1.1** H1 Hybrid shall consist of vehicles classified by engine type and drive wheel configuration only

**5.1.2** H2 shall consist of H2 Restricted Preparation Vehicles, H2 Limited Preparation Vehicles, and Factory Preparation Vehicles. It is the intent of the series that these compete against each other. H2 will impose a maximum horsepower limited for each engine classification.

**5.2 Vehicle Preparation**

**5.2.1** H1 Hybrid – Vehicles classified by engine type and drive wheel configuration only.

**5.2.2** Restricted Preparation – Vehicles that are not defined, but rather specified.

**5.2.3** Limited Preparation – Vehicles classified by engine type only.

**5.2.4** Factory Preparation – Vehicles classified by engine and chassis combination.

**5.3 H1 Hybrid**

Engine	Trim	Notes	Max Comp	Weight
B-series	All	Unmodified OEM crank, max 70mm throttle body, OEM-style “log” intake manifold, engine otherwise unrestricted	12.7	2250
C-Series	All	See section 8	12.5	2800
D-series	All	Engine unrestricted	12.7	2000
F20	All	See section 8	12.5	2300
F22	All	See section 8	12.5	2450
H22	All	See section 8	12.5	2450
J-Series	All	See section 8	12.5	3000
K20	All	See section 8, must use OEM cams	12.5	2350
K24	All	See section 8, must use OEM cams	12.5	2600
L15B	All	See section 8	10.6	3250

*Note: RWD shall add 4% to minimum weight listed in table above*

**5.5 H2 Limited Preparation Vehicles**

Year	Make	Model	Engine	Notes	Max Comp	Max HP	Weight
All	Honda/Acura	All	D15, D16D/Z	Cam(s) unrestricted. Intake manifold	12.5:1	140	2000

				unrestricted with exception of Individual Throttle Bodies			
All	Honda/Acura	All	B16 (non-CTR)	Crank may not allow stroke to exceed 1600cc, OEM Type R or CTR cams allowed	10.9:1	165	2250
All	Honda/Acura	All	B16B (CTR)	100% OEM	11.3:1	185	2400
All	Honda/Acura	All	B17A1	OEM Type R or CTR cams allowed	10.2:1	172	2350
All	Honda/Acura	All	B18A/B	Crower Cams P/N: 62402HC-2 permitted (no weight increase). Blox or Skunk2 OEM-style intake manifold permitted.	9.9:1	150	2250
All	Honda/Acura	All	B18C1	Blox or Skunk2 OEM-style intake manifold permitted.	11.1:1	175	2400
All	Honda/Acura	All	B18C, B18C5 (US or JDM)	100% OEM	11.6:1	190	2500
All	Honda/Acura	All	B20B	Crower Cams P/N: 62402HC-2 permitted (no weight increase). Blox or Skunk2 OEM-style intake manifold permitted.	10.1:1	160	2300
All	Honda/Acura	All	H22	100% OEM. "TypeS" and "EuroR" not permitted	10.6:1	200	2625
All	Honda/Acura	All	H23 (non-VTEC)	100% OEM. "TypeS" and "EuroR" not permitted	10.3:1	160	2475
All	Honda/Acura	All	F20B	JDM OEM	11.0:1	200	2575
All	Honda/Acura	All	F22/F23	(SOHC) 100% USDM or JDM OEM	9.8:1	160	2400
All	Honda/Acura	All	K20A2, K20Z1, K20Z3	100% USDM OEM	10.2	200	2750
All	Honda/Acura	All	K20A3	100% USDM or Base Model JDM Accord/CRV	10.3:1	170	2385
All	Honda/Acura	All	K24A1/A4	100% USDM	10.2:1	180	2575
All	Honda/Acura	All	K24A2	100% USDM	11.0:1	205	2875

## 5.6 H2 Restricted Preparation Vehicles

Year	Make	Model	Engine	Notes	Max HP	Weight
All	Acura	RSX	K20A2/K20Z1	Type S	200	2700
06-11	Honda	Civic	K20Z3	Si	200	2700
<del>04-08</del>	<del>Acura</del>	<del>TSX</del>	<del>K24A2</del>		<del>205</del>	<del>2800</del>
12	Honda	Civic	K24Z7	Si	205	2800
15+	Acura	TLX	K24W7	8 speed DCT	205	2800
13+	Acura	ILX	K24Z7	6 speed	205	2800
17+	Honda	Civic	L15B	Si	205	2800

## 5.7 H2 Factory Preparation Vehicles

Year	Make	Model	Engine	Notes	Max HP	Weight
00-03	Honda	S2000	F20C		220	2825
04-09	Honda	S2000	F22C1		220	2900

## 5.8 H4 Factory Preparation Vehicles

Year	Make	Model	Engine	Notes	Weight
86-89	Acura	Integra	1.6L		2275
90-93	Acura	Integra	1.8L non-VTEC		2500
94-01	Acura	Integra	1.8L non-VTEC		2500
90-97	Honda	Accord	2.2L	LX/DX	2525
94-97	Honda	Accord	F22B	EX	2600
98-02	Honda	Accord	F23A1	LX/EX	2690
88-91	Honda	Civic	STD	DX	1900
88-91	Honda	Civic	1.6L	Si	2150
88-91	Honda	Civic	1.6L	EX	2200
92-95	Honda	Civic	1.6L VTEC	EX/Si, SOHC	2200
92-95	Honda	Civic	8 valve	CX	1900
96-00	Honda	Civic	1.6L VTEC	EX	2200
92-00	Honda	Civic	1.6L non-VTEC	DX/LX	2125
2006	Honda	Civic		DX/LX/EX	2415
88-91	Honda	CRX	1.6L	Si	2150
88-91	Honda	CRX	1.6L	DX	1900
All	Honda	CRX		Not Otherwise Classified	1900
96-97	Honda	Del Sol	1.6L non-VTEC	S	2150
96-97	Honda	Del Sol	1.6L VTEC	Si, SOHC	2200
92-96	Honda	Prelude		S	2525
88-91	Honda	Prelude	B20A5, B21A1		2500
01+	Honda	Fit		JDM	2050

## 5.9 Maximum Horsepower Specifications for H2

**5.9.1** Horsepower readings will be measured utilizing a Dynojet Dynamometer with the SAE correction factor and smoothing factor of "5".

**5.9.2** 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.

**5.9.3** 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 unless the competitor in question weighs an additional 18lbs for each horse power they are over the maximum limit for the duration of the event.

**5.9.4** NASA may also utilize data acquisition systems to measure real time on-track performance during competition to supplement the trackside dynamometer testing.

**5.9.5** Honda Challenge competitors in the H2 class should refer to the vehicle classification chart above to find their specified maximum horsepower limit.

**5.10 Engine Dynamometer Testing Procedure:** To ensure objectivity, a Honda Challenge Series official, an appointed official, or an approved technician will operate any cars being inspected on the chassis dynamometer. Three consecutive "official" dyno pulls must be performed and **the average result of the three pulls** (rounded to the nearest tenth) will be used for compliance. NASA, its officers, officials, and assigns are not responsible for any mechanical failures or damage otherwise while the dyno runs are being performed.

- 5.10.1** DynoJet brand dyno IS REQUIRED for testing and inspection. All dyno readings must be corrected to SAE J1349 Rev JUN90 with dyno smoothing function set to 5. Dyno information should be recorded.
- 5.10.2** Prior to the dynamometer inspection the competitor may top off any fluids needed to ensure the engine and drivetrain is not damaged during testing. Fluids must be added with a NASA Technical Inspector present and no other modifications or adjustments may be made.
- 5.10.3** All dyno pulls will be made with the hood opened.
- 5.10.4** Prior to the first official run, an official or technician will confirm that the accelerator pedal opens the throttle completely and that the wide open throttle switch is properly connected.
- 5.10.5** Dyno pulls will be made in 4th gear or at a 1:1 ratio.
- 5.10.6** During an official dyno test, the car must be fitted with the tires used on the car in the previous session with the drive tire pressures set at a minimum of 33 psi.
- 5.10.7** Electric engine fans and or external cooling fans and externally operated water misters may be used while the car is on the dyno.
- 5.10.8** Dyno runs shall be made with water temperature in the normal operating range of 165F-210F and drive train fluids up to a normal running temperature. All pulls shall be made at the vehicles normal operating temperature, not to exceed 210 degrees. Should the temperature exceed 210 degrees, that pull is void and shall be repeated once the engine has cooled enough to operate within the specified range. Water temperature may be verified using external temperature measurements such as an infrared temp gun at the thermostat housing.
- 5.10.9** Three consecutive runs shall be made. The RPM range shall be consistent for all three runs. Starting RPM shall be no higher than 2500 and shall end at the rev limiter.
- 5.10.10** Should any run result in an erratic or non-repetitive result, series officials may dismiss the result or request another dyno pull.
- 5.10.11** The NASA Compliance Director may also make adjustments to the official maximum horsepower and torque numbers if he/she feels that the dyno is reading unusually high or low.
- 5.10.12** Multiple dynos may be in use at any given event. If so, using a reference car, the % difference between the facilities highest and lowest reading will be used to satisfy CCR 28.1.11. (1/2 of a tool's measurement). The competitor has no choice of dyno to be measured on, and will not be re-measured on another dyno without a completed appeal satisfying CCR 17.5.3.

**5.10.13 Table 1: Multi-Dyno Testing Procedure Using Reference Car (example)**

	Run 1	Run 2	Run 3	Average
	HP	HP	HP	HP
Dyno 1	159.9	163.4	161.1	161.5
Dyno 2	159.2	164.5	161.9	161.9
Dyno 3	157.8	162.1	160.9	160.3
Difference of Highest-Lowest Average				1.60

The observed difference in average HP for the test car between multiple official dynos in use is 1.6 HP, so 0.8 HP will be considered the error. This 0.8 HP will be subtracted from the competitor measured average before rounding to the official test result.

**5.10.14** The multiple-dyno averaging procedure is only good for one competition day during a multiple day event, and must be re-run using a reference vehicle to continue to satisfy CCR 28.1.11. CCR 28.1.11 will not apply when only one dyno is in use on any event day.

**5.10.15** Reference cars may be employed during an event to account for possible internal (instrument) or external (changing weather conditions) drift. Where practical, it is recommended that the selected reference car's engine be sealed (or critical components such as the MAF and ECU etc. be marked) by a NASA official at the start of the event and dyno tested (at a minimum) at the beginning and end of the event.

**5.11 Weight:** Minimum vehicle weights, in pounds, are the result of research based on the weights of Honda Challenge legal racecars. Potential power-to-weight ratio largely determines the minimum weight for any given vehicle. Other factors include brakes, torque, and wheelbase. Vehicle weights will be taken, as raced, post qualifying or race, with driver.

**5.11.1** Vehicle weights may be adjusted to equalize fairness in class. Notice will be given no less than 10 days prior to changes taking effect.

**5.11.2** Up to two hundred and fifty (250) pounds of additional weight may be added to the vehicle providing that all of the following conditions are met:

- a)** This additional weight must serve no other purpose than to increase the weight of the vehicle. This additional weight shall be known as "ballast."
- b)** Ballast must be made of solid metal.
- c)** All pieces of ballast must be bolted within the passenger footwell area, through the floor pan on the passenger side of the cockpit, between the firewall and rear most factory seat mounting holes for the front seat.
- d)** All ballast must be secured in such a way that it cannot come loose in an impact. This means that the bolts holding the weight must be strong enough to support the load and be backed by big enough washers so that the mounting will not punch through the thin metal floor. Also, at least two (2) bolts (3/8 or larger) must be used weights over 50 pounds.
- e)** It is ***strongly recommended*** that at least one (1) 3/8-inch SAE Grade-5 bolt, two (2) fender washers, and a locking nut system be used for every ten (10) pounds of weight. Example: A seven (7) pound block requires at least one (1) bolt system as described herein. A thirty (30) pound block requires at least a three (3)-bolt system. Note: Metric Grade 8.8 is equivalent to SAE Grade 5.

**5.12 Vehicles Not Currently Classified:** Drivers wishing to compete in a vehicle that is not currently classified must submit a written request to the NASA Honda Challenge Series Director in their region describing the vehicle and its specific modifications for which they wish to have classed. These requests should be postmarked no less than thirty (30) days before the date of a race the driver wishes to enter.

## **6. Permitted Fuel**

**6.1 H1 Fuel:** Must follow fuel regulations provided in the CCR.

**6.2 H2 Fuel:** Must meet the following requirements:

**6.2.1** Any grade of unleaded or leaded fuel is allowed provided it is obtained from a commercial fuel station that is open to the general public (Arco, Chevron, etc.)

**6.2.2** In addition to 6.2.1, any grade of unleaded or leaded fuel is allowed which is obtained from the fuel vendor at race track where you competing. You may NOT obtain fuel from drums or cans unless that is the fuel vendor's customary method of dispensing fuel. If that is the case, you are not allowed to place a special order of fuel different than the vendors stock on hand.

**6.2.3** Gasoline containing greater than 20% ethanol content is specifically prohibited for use in H2 and H4. (This includes "pump" gas advertised as "Ethanol" fuel.) Also, any fuel obtained from cans or drums which advertise "oxygenated" is prohibited. (i.e. VP MS109).

## **7. General Modifications – All Classes**

### **7.1 Engine**

**7.1.1** Polyurethane or hard rubber engine mounts and/or inserts may be used.

**7.1.2** Any air intake system in front of the throttle body, including mass air sensor, may be used but stock throttle body must be retained.

**7.1.3** Carbureted vehicles may use an alternate carburetor of the same design and configuration (for example, a single barrel can be replaced with an alternate single barrel, but not a dual barrel).

**7.1.4** Any exhaust manifold and exhaust system may be used provided it exits behind the driver. All emission related devices may be removed or disabled *NOTE: Some facilities have rules governing sound limits. Vehicles must fall within these limits to be allowed to compete.*

**7.1.5** Fasteners are unrestricted but must perform the exact OEM function.

**7.1.6** Gaskets (including the use of phenolic spacers) may be replaced with others of unrestricted origin so long as they do not violate any other rules contained herein.

**7.1.7** Engine drive belts may be replaced with others of unrestricted origin.

**7.1.8** Alternate accessory drive pulleys ("underdrive pulleys") may be used. Crankshaft may use any pulley (size and material unrestricted).

**7.1.9** Alternate water pumps of OEM design may be used and must bolt to engine without modification.

**7.1.10** Cars equipped with vacuum advance distributors may perform necessary distributor modifications to install other Honda electronic advance distributors.

**7.1.11** H and F series engines may utilize Kaizenspeed balance shaft removal kit.

## 7.2 Ignition

- 7.2.1 Spark plugs and ignition wires may be replaced with others of unrestricted origin.
- 7.2.2 Ignition timing is unrestricted.
- 7.2.3 Any ignition system that utilizes the original OEM type distributor for spark delivery is permitted. Internal distributor components and cap may be replaced with others of non-OEM origin. An external ignition coil may be added. Crankfire ignitions are prohibited unless fitted as OEM.

## 7.3 Fuel Systems

- 7.3.1 Fuel lines and fuel pumps may be replaced with others of unrestricted origin.
- 7.3.3 Adjustable fuel pressure regulators are permitted
- 7.3.3 Holley HydraMat may be added to the OEM fuel tank
- 7.3.4 NASA CCR-Compliant fuel safety cells are allowed. Rear floor pan may be modified to accommodate a fuel cell. If the fuel cell is not present, said opening must be covered with metal and sealed.

## 7.4 Oil System

- 7.4.1 Engine oil coolers and remote oil filters are unrestricted.
- 7.4.2 Valve covers may be modified *only* to accommodate a breather and/or filler.
- 7.4.3 A pressure accumulator such as an Accusump may be used.
- 7.4.4 Oil pans, baffles, pickup, pump and scrapers are unrestricted. No dry sump unless OEM.

## 7.5 Transmission and Driveline

- 7.5.1 Shift levers and knobs are unrestricted.
- 7.5.2 Polyurethane or hard rubber transmission mounts and/or inserts may be used.
- 7.5.3 Polyurethane or hard rubber shifter mounts and/or inserts may be used.
- 7.5.4 Flywheel, Clutch, and Pressure Plate are unrestricted, provided each item individually would function properly with otherwise OEM parts
- 7.5.5 Limited slip differentials are unrestricted but must fit in an unmodified OEM housing
- 7.5.6 Final drive ratio is unrestricted. All other gearing must remain OEM in part and gearing for that specific engine series.

## 7.6 Engine Cooling

- 7.6.1 Radiator and Cap are unrestricted, but must be mounted in the standard location and orientation
- 7.6.2 Ducting to improve airflow to radiator is permitted.
- 7.6.3 Thermostats may be modified or removed. Restrictors may be utilized.
- 7.6.4 Cooling fans may be added or removed. Means of actuation is unrestricted.
- 7.6.5 Ethylene glycol-based anti-freeze is not permitted. Other additives, such as Redline Water Wetter, are permitted. The Race Director may make exception to this rule in cold weather on a race by race basis.

## 7.7 Miscellaneous

- 7.7.1 All Heating Ventilation and Air Conditioning (HVAC) components may be removed.
- 7.7.2 Heater hoses, clamps and heater control valves may be added or substituted with those of unrestricted origin, or removed.
- 7.7.3 Windshield wiper arms, motors, controls and washer bottles may be removed.
- 7.7.4 Power steering pumps, hoses, motors, control units, and mounting brackets may be removed.
- 7.7.5 Cruise Control components may be removed.
- 7.7.6 All engine components not listed in these rules shall conform to factory OEM specifications.
- 7.7.7 Vehicle wiring system is unrestricted. Wiring, fuse boxes, switches, may be modified, removed, replaced, relocated or substituted with non-OE components.
- 7.7.8 Weather stripping and sound deadening may be removed.
- 7.7.9 Vehicle ignition cylinder, door locks, and trunk locks may be removed.
- 7.7.10 Hood, trunk, and door hinges may be modified or replaced by items that serve the same purpose.
- 7.7.11 Any OEM Honda/Acura steering rack may be used but must attach not require modification
- 7.7.12 Non-OEM engine and/or transmission/differential mounts are permitted but must locate the engine/transmission/differential in the exact location as the OEM Honda/Acura engine, transmission, and

differential mounts. Items may only provide the original functionality of locating the engine/transmission/differential as intended by the manufacturer.

## 7.8 Suspension

**7.8.1** Minimum ride height shall be four (4) inches measured without driver at the lowest point of the rocker panel but not the welded seam.

**7.8.2** Single bodied adjustable shock absorbers are unrestricted, however, the number and type shall be the same as stock OEM.

**7.8.3** Bump stops may not be more than two (2) inches in length.

**7.8.4** MacPherson strut cars may substitute struts or use any insert.

**7.8.5** Adjustable spring perches (coilovers) are allowed and may be part of the shock body.

**7.8.6** Sway bar size is unrestricted ~~but must attached to control arms within 1 inch of OEM position~~ but may not be adjustable while the vehicle is in motion.

**7.8.7** Rear subframe brace is permitted (i.e. ASR rear subframe)

**7.8.8** Reinforcement of suspension mounting locations is permitted provided there is no performance benefit or relocation of the mounting points.

**7.8.9** Suspension bushings of unrestricted origin are allowed. (spherical, Delrin, etc.)

**7.8.10** Camber adjustment devices (plates/shims/eccentric, etc.) are unrestricted but are limited to one per wheel. Front and rear upper control arms may be modified or replaced with items that allow camber and/or caster adjustment only.

**7.8.11** Independent rear suspension mounting holes may be slotted or reinforced for camber and/or toe adjustment.

**7.8.12** Any spring rate or torsion bar rate may be used. However, the same number and type as stock shall be retained with exception of helper springs being permitted.

**7.8.13** OEM Rear Toe adjustment arm may be replaced with any substitute

## 7.9 Brakes

**7.9.1** Brake pad/shoe, fluid, and brake lines are unrestricted.

**7.9.2** Brake bias or proportioning valves may be used. Adjustment controls may be driver accessible.

**7.9.3** Front brakes may be ducted from existing holes in the vehicle's bodywork provided they extend in a forward direction (from brake forward). Auxiliary lights may be removed to facilitate brake cooling ducts.

Two (2) openings may be cut in the front valence to allow up to three (3) inch diameter ducts.

**7.9.4** Rotor backing plates ("dust shields") may be removed or modified to facilitate cooling.

**7.9.5** Brake rotors and/or drums must be the same type, material, and dimensions as OEM. Brake rotors and/or drums may be cryogenically treated.

**7.9.6** Parking brakes and all associated components may be removed.

**7.9.7** Bolt on brake master cylinder brace is permitted, but may only perform the function of limiting firewall flex while brake pedal is depressed.

**7.9.8** ABS systems may be disabled, removed, or relocated.

## 7.10 Body: Vehicle bodywork must remain stock except for the following:

**7.10.1** Fender lips may be rolled or flattened for tire clearance. Non-metallic fender liners may be removed. Fenders must resemble the same general shape as OEM. (Extreme rolling designed to transform the fender lip into a horizontal surface thus widening the fender is not permitted.)

**7.10.2** Hood and trunk pins are allowed. In addition, hood and trunk latch mechanism may be removed so long as some positive action external latch is used.

**7.10.3** Convertible tops and related hardware shall be removed.

**7.10.4** Radio antennas may be removed or added for two-way communication.

**7.10.5** Screens or mesh may be added to prevent debris entering the bodywork.

**7.10.6** The Del Sol is allowed to remove or replace the rear window with Lexan in order to accommodate rear roll bar braces. This body modification is for the sole purpose of rear roll bar brace installation.

**7.10.7** Splash guards (mud flaps), wheel well molding, and body side molding may be removed, modified, or replaced with alternate materials (must be equal to or less than OE part dimensions and serve the same function as OEM part).

**7.10.8** Headlight lenses may be replaced with alternate materials of unrestricted origin. These materials must not serve as ducting. The headlight bucket must remain in place. Removal of the headlight assemblies is not permitted.

**7.10.9** Tail light and side marker lights may be replaced with any design that performs the same function.

**7.10.10** Impact Bumper(s) must remain OEM. Exception: Additional material may be added to OEM bumper (not frame) to extend the unit for additional body/chassis protection. The bumper support and any added material must remain behind bodywork.

**7.10.11** Front (chin) spoilers/air dams/splitters may be used provided they are either bolted or riveted to the vehicle (not taped). Front (chin) spoilers/air dams/splitters may not extend rearward more than 1/2 (one half) inch past the front of the front wheel well opening. Front (chin) spoilers/air dams/splitters shall not protrude beyond the overall outline of the body when viewed from directly above. Canards or any other aerodynamic devices are prohibited except where noted herein

**7.10.12** Any rear deck spoiler/wing that attaches to bodywork is allowed. Rear spoiler may not protrude beyond the overall outline of the body when viewed from directly above.

**7.10.13** Rocker sill kits are permitted providing they are no lower than 3.5" from the ground, and that they do not have a continuous bottom surface wider than 3" for more than 12" in length at any given point along the bottom surface of the sill or "side-skirt".

**7.10.14** All exterior alterations must be deemed aesthetically acceptable by the NASA Honda Challenge Series before a vehicle can compete.

**7.10.15** All vehicles must have at least one (1) Vehicle Identification Number (VIN) attached to the vehicle and correspond to the make and model of that vehicle. This VIN shall be the basis of all OEM specifications. Body swaps are, however, allowed.

## **7.11 Body Swaps**

**7.11.1** Body swaps are permitted provided there is no structural advantage over the original body

**7.11.3** The trim level of the car *as it is classed for competition* must remain intact. Mixing and matching of trim levels is not permitted.

## **7.12 Vehicle Interior**

**7.12.1** Any CCR-Compliant steering wheel and seat may be used.

**7.12.2** The factory dashboard must remain intact but may be modified to accommodate roll cage, gauges, switches and instrumentation.

**7.12.3** Interior mirror(s) are unrestricted.

**7.12.4** All interior trim pieces, stereo components, and factory seat belts may be removed.

**7.12.5** The spare tire and associated components must be removed.

**7.12.6** A dead pedal may be added.

**7.12.7** Pedals may be altered for driver comfort.

**7.12.8** Gauges and instruments may be added, removed, or replaced.

**7.12.9** Ducts may be installed in the driver or passenger window opening to provide fresh air to the driver's compartment or fresh air to the driver.

**7.12.10** Driver cooling (such as cool suit) systems may be used.

## **7.13 Wheels and Tires**

**7.13.1** The spec tires are Toyo Proxes RR (dry) and Toyo Proxes RA-1 (wet).

**7.13.2** Track width may be changed by use of spacers or wheel offset, but the tire shoulder may not protrude outside of the fender when viewed from directly above the hub.

**7.13.3** Wheel studs, wheel bolts and/or wheel nuts are unrestricted.

**7.13.4** Any wheel diameter may be used.

**7.13.5** The maximum wheel width for H2 and H4 is seven (7.00) inches.

**7.13.6** Wheels must be made of metal.

## **8. Allowed Modifications – H1**

### **8.1 Introductory Notes**

**8.1.1** This section of the rules is to be read as an addition to, or replacement of, the rules for car preparation listed in section 7 General Modifications.

**8.1.2** Rules listed within section 8 may be in contradiction with those listed in section 7. In these cases, the H1 Allowed Modifications in section 8 supersede.

**8.1.3** Items in section 8 noted as “unrestricted” means that any part, from any manufacturer (Honda or otherwise) may be used to construct said component(s).

## **8.2 H1 Hybrid Engine Preparation**

**8.2.1** Engine and transmission mounts, and associated components (shift linkages, adapter plates, etc.) required to perform an engine/drive train swap are unrestricted

**8.2.2** Cams, cam gears, valve springs, retainers, and keepers are unrestricted. Non-OEM cams for that series engine will incur a minimum weight increase of 100lbs.

**8.2.3** Unless otherwise noted, OEM connecting rods for that series engine are required

**8.2.4** F-series and H-series cylinders may be sleeved, subject to maximum compression ratios noted herein. F-series must utilize OEM or spec piston from Precision Racing Technology, part #PRTS2KHC.

**8.2.5** Valve preparation (angle, cut, etc.) is unrestricted

**8.2.6** Fuel pumps, Injectors, filters, rails, and pressure regulator are unrestricted. Surge tank permitted.

**8.2.7** Engine management systems are unrestricted

**8.2.8** Cylinder head preparation and porting is unrestricted. Valve size and material must conform to original specification for that particular head.

**8.2.9** Unless otherwise noted, intake manifolds must be unmodified OEM Honda parts. Port matching is allowed but cannot be machined beyond one (1) inch into the intake manifold at the cylinder head mating surface and/or the throttle body mating surface.

**8.2.10** K-series engine blocks must utilize the Honda specified crank, rods, and pistons. i.e. K20 block must use K20 pistons, rods, and crank. K20 engine must use K20 head and K24 engine must use K24 head. K24 engine is not permitted to use K20 head.

**8.2.11** L15B engine is required to use OEM turbo (part #18900-5AA-A01 or part #18900-5PA-A01)

## **8.3 Chassis and Body Preparation- H1 Only**

**8.3.1** Acura TLX must utilize the 6 speed manual transmission from 04-08 TL or 03-12 Accord.

**8.3.2** Brake systems are unrestricted, however rotors (rotor hats excluded) must be made entirely of a ferrous metal

**8.3.3** Cooling systems are unrestricted, subject to section 7.6.4.

**8.3.4** Wheel size and width unrestricted, subject to section 7.13.6.

**8.3.5** Fenders may be cut, rolled, pulled, or have aftermarket flares installed, though only to the extent necessary to cover the tire shoulder as viewed from above.

**8.3.6** Maximum track width is stock plus four (4) inches, but the tire shoulder may not protrude outside of the fender when viewed from directly above the hub.

**8.3.7** Power Steering System is unrestricted

**8.3.8** Batteries are unrestricted in size, type and weight and may be relocated. Batteries located inside passenger compartment must be mounted in accordance with the CCR.

**8.3.9** Headlights, corner lenses/housings, turn signal lenses/housings and any associated attaching hardware may be replaced, substituted with any material, or removed. Location may be used to pick up air for brake cooling, engine cooling, or air intake only.

**8.3.10** Hood, trunk, rear hatchback, bumper supports, and the front bumper cover may have material removed or replaced with a substitute of unrestricted material

**8.3.11** The S2000 may utilize any composite hardtop.

**8.3.12** The rear bumper cover may be replaced with a cover of alternate material and design. The shape may not contain diffuser tunnels any greater than three (3) inches in depth (measured across the vertical ribs to the top of tunnel). Area in front (towards driver) of rear bumper cover must remain open (like OEM) and may not be sealed off to smooth airflow. Rear bumper covers may be trimmed up to the bottom edge of the OEM crash bumper. Rear bumper covers may contain holes to relieve air pressure. The sum total of the area of these holes may not be greater than the remaining bumper material. The design must be tasteful and secure.

**8.3.13** Windshield must remain stock. All other windows may be replaced with polycarbonate/Lexan.

**8.3.14** Window channel may be removed

**8.3.15** A vertical front air dam (5° tolerance) that follows or extends beneath the outermost edge of the front and side bodywork/fascia is permitted.

**8.3.16** A single, flat, horizontal front splitter that protrudes no greater than 4” from where it intersects with the fascia or air dam is permitted. Along the entire splitter, there must be at least 1” of fascia or air dam material above/superior to where the splitter intersects the fascia/air dam, including at any air intake region. Canards are prohibited.

**8.3.17** A single rear wing or spoiler that does not exceed a height of 8" above the roof line, or width greater than the vehicle's body width, or end plates greater than 12" in length or height, or 12" protrusion from the rear of the vehicle. Body width does not include mirrors, splitter, door handles.

**8.3.17** Cockpit and/or remote adjustable spoiler controls are prohibited.

**8.3.18** Ballast location is unrestricted.

**8.3.19** Dashboards may be replaced with another of unrestricted material but must remain in original location. The dashboard must be tasteful and cover any exposed wires and roll cage bars under the dash.

**8.3.20** Crossmember may be modified or replaced for the sole purpose of engine fitment.

**8.3.21** Remote Reservoir shocks are permitted with a 25lbs increase in minimum weight. Note: any shock with an external reservoir is considered "remote". If shocks with both high and low speed compression or high and low speed rebound adjustability are utilized, a 75lbs increase in minimum weight is required.

**8.3.22** OEM tie rod ends may be replaced with a substitute.

**8.3.23** Aftermarket control arms of exact OEM length may be utilized. Relocation of suspension mounting points is not permitted

**8.3.24** Impact bumper may be replaced or modified with a metal substitute to perform same function.

**8.3.25** Roll center adjusters and bumpsteer correction kits are permitted.

## **9. Allowed Modifications- H2 Only**

### **9.1 Introductory Notes**

**9.1.1** Vehicles should be prepared to the standards in section 7 except where listed below. Rules in Section 9 are to be read as an addition to, or replacement of, the rules for car preparation listed in sections pertaining to section 7.

**9.1.2** In section 9 of the rulebook, when the description of a racecar's component is permitted to be "unrestricted" it allows any part, from any manufacturer (Honda or otherwise) may be used to construct said component(s).

**9.1.3** Restricted Preparation Vehicles (e.g. the Acura RSX) are NOT eligible to be prepared as "Limited Prep" Vehicles. Additionally, Factory Preparation vehicles (e.g. the Honda S2000) are NOT eligible to be prepared as "Limited Prep" or "Restricted Prep" Vehicles. The intention is for Restricted Prep Vehicles, Limited Prep vehicles, and Factory Prep vehicles to compete against one another. Restricted and Factory Preparation Vehicles must follow the preparation rules in section 7 Allowed General Modifications except where stated otherwise.

### **9.2 H2 Limited Preparation Vehicles Only**

**9.2.1** Any Honda/Acura USDM or JDM chassis may be used with a listed Limited Prep engine

**9.2.2** Any Honda/Acura master cylinder or brake booster may be used. Removal of booster is permitted.

**9.2.3** Brake Calipers, Brake Rotors, and method of attachment are unrestricted. However, rotors (rotor hats excluded) must be made entirely of a ferrous metal.

**9.2.4** Any OEM transmission that bolts directly to the block may be used. Adaptor plates are not permitted. Gear ratios must remain OEM for that series of transmission expect for the final drive ratio.

**9.2.5** Engine and transmission mounts, and associated components (shift linkages, axles, wiring, etc.) required to perform an engine/drive train swap are permitted.

**9.2.6** Battery type, size, voltage, weight and location are unrestricted.

**9.2.7** Remote Reservoir shocks are permitted with a 25lbs increase in minimum weight. Note: any shock with an external reservoir is considered "remote". Shocks with more than 2 adjustment parameters require a 75lb increase in minimum weight.

**9.2.8** Non-OEM hoods and trunks/rear hatch of unrestricted material are permitted. OEM hood, OEM Trunk and OEM rear hatchback may have material removed for the purpose of weight removal but must remain in place. Outer-skin of trunk/hatchback must not be altered. OEM hood "venting" is permitted.

**9.2.9** Any Honda/Acura Knuckle/Hub/Control arm may be used on any Honda/Acura Chassis providing suspension pick up points are not changed on chassis or OEM parts. Example- Honda CRX may use Acura Integra knuckles.

**9.2.10** Headlights, corner lenses/housings, turn signal lenses/housings and any associated attaching hardware may be replaced, substituted with any material, or removed. Nothing may extend from the front of the vehicle to collect air. Location may be used to direct air for brake cooling or engine cooling in any fashion. The air intake must collect air from a non-pressurized source. No such design shall allow an enclosed track to specifically direct air to the intake and terminate at the intake.

**9.2.11** Engine support cross member may be modified (not replaced) for the sole purpose of engine/header fitment.

**9.2.12** Impact bumper may be fabricated, modified, or replaced with a metal substitute (i.e. DOM tubing) to perform same function.

**9.2.13** Windshield must remain stock. All other windows may be replaced with polycarbonate/Lexan.

**9.2.14** All B series engines may utilize an "ITR" replica intake manifold manufactured by Skunk2 (PN 307-05-0270, 307-05-0280, 307-05-0290) or Blox (PN BXIM-10100, BXIM-10200, BXIM-20100) provided the manifold is made entirely of a metal alloy.

**9.2.15** Any ignition system that utilizes the original OEM type distributor for engine positioning is permitted. External ignition coil(s) as well as external igniters may be utilized in lieu of internal distributor components. Crankfire ignitions and cam triggers are prohibited unless fitted as OEM. AEM users are permitted to use the AEM engine position module in place of the OEM distributor as part of the permitted. AEM coil on plug kit. AEM coil on plug conversion kit part# 30-2860 permitted.

**9.2.16** H2 Limited Prep vehicles are permitted up to a 235mm wide tire.

**9.2.17** Aftermarket rear lower control arms of exact OEM length and OEM location of pickup points may be utilized.

**9.2.18** The following are NOT allowed on all Limited Preparation Vehicles:

- Unrestricted Cylinder Head Porting
- Unrestricted Camshaft(s), except where stated otherwise
- Unrestricted Intake Manifold Porting

### **9.3 H2 Limited Preparation Vehicle: Engine Preparation**

**9.3.1** Engines may be balanced and/or blueprinted. Lightning of moving parts beyond what is necessary to balance is prohibited. Engine bearings may be replaced with aftermarket replacements and engine clearances (piston to wall, valve lash, etc.) are unrestricted and are considered blueprinting.

**9.3.2** Engines may be bored to a maximum of .040 inch (1 mm) over standard bore size.

**9.3.3** Factory replacement pistons or the exact equivalent shall be used. Exact equivalent shall be defined as the same dome/dish/valve relief configuration, weight, ring thickness and location, and pin location as the OEM replacement piston. Wrist pins and method of retention must also conform to OEM specifications. In the event that a .040 factory replacement piston/wrist pin is not available, the oversize pistons/wrist pins shall not weigh any less than the largest size OEM piston for that engine.

**9.3.4** Piston rings are unrestricted but must be of proper OEM ring thickness.

**9.3.5** Cylinder head intake ports, exhaust ports, and intake manifold may be port matched but cannot be machined beyond one (1) inch into the head or intake.

**9.3.6** Valve preparation at the face of the valve where it mates to the seat (angle, cut) is unrestricted, but size must remain factory spec and material must remain OEM Honda.

**9.3.7** Valve guide material is unrestricted. However, shape and size must remain the same as OEM.

**9.3.8** Compression may be increased one half (.5) a point greater than OEM number.

**9.3.9** Cylinder head gasket surfaces may be machined so long as it does not increase compression beyond the maximum value allowed for make and model.

**9.3.10** Timing gears must remain OEM. Cars equipped from the factory with plastic timing gears may replace them with metal gears so long as cam timing remains stock. OEM crank timing gear may be adjusted with an offset key back to stock position. Offset keys may be used with cam gears on SOHC engines only.

**9.3.11** Any OEM Honda or Acura ECU (including other models, domestic markets (JDM) and generations) may be used, and may be relocated ONLY to facilitate cage installation. Reprogramming of OEM ECU is allowed. Piggyback ECU's that plug into the OEM ECU (e.g. Hondata) are allowed. VAFC (VTEC/Air/Fuel) controllers or other devices that perform the same function may be used. AEM Standalone ECU is permitted. OBD0 equipped cars may update distributor and associated wiring to OBD1 or OBD2. This includes the use of a "jumper harness" to convert the OBD0 wiring of the stock ECU plugs to work with the OBD1 or OBD2 ECU. Additionally, OBD2 may also use a jumper harness to convert back to OBD1.

**9.3.12** The entire engine assembly, (cylinder head and block) MUST be constructed entirely of Honda/Acura OEM parts. Cylinder head and internal engine parts must be OEM parts for that particular engine code. Updating and backdating of parts for that engine code is permitted. No aftermarket parts are permitted in, the "bottom end," of a Limited Prep Vehicle engine (except were specifically stated).

Example(s): 1) A JDM SOHC ZC may not use pistons from a JDM DOHC ZC engine and a head from a D16Y8 because this involves putting parts together from 2 different engines. 2) A USDM B18C1 may not use ITR crank and pistons with ITR head and call it a B18C5. 3) A JDM B18C (GSR) may use ITR crank, pistons and ITR head and call it a JDM ITR engine since that is the proper engine code for both engines.

- 9.3.13** “Aftermarket OEM” replacement pistons and rings are allowed but must be identical in every manner to the OEM Honda/Acura part.
- 9.3.14** Valve Springs, valve locks, valve retainers, and valve shims are unrestricted
- 9.3.15** Any throttle body may be used providing it is 62.5mm or less at its smallest restriction point. Over-boring of stock throttle body is permitted.
- 9.3.16** Port matching is allowed but cannot be machined beyond one (1) inch into the intake manifold.
- 9.3.17** Items (such as throttle bodies and intake manifolds) that attach to the cylinder head may be re-drilled for fitment purposes ONLY. Alteration of air, fuel, and/or coolant passages is not permitted. Fitment modifications that alter air flow as a side effect will be deemed illegal.
- 9.3.18** Fasteners (e.g. bolts) anywhere in the engine.
- 9.3.17** Camshaft gears (including adjustable) are unrestricted.
- 9.3.18** Fuel pumps, fuel injectors, fuel filters, and fuel rails are unrestricted.
- 9.3.19** Radiator mounts may be relocated left or right along the radiator core support to accommodate greater cooling efficiency.

## **9.4 H2 Restricted Preparation Vehicle Preparation**

- 9.4.1** Engines must be completely OEM and conform to the exact specifications found in the factory service manual.
- 9.4.2** Brake Calipers, Brake Rotors, and method of attachment are unrestricted
- 9.4.3** Non OEM hoods of unrestricted material are permitted. OEM hood, OEM Trunk, OEM rear hatchback, and OEM bumper supports may have material removed for the purpose of weight removal but must remain in place unless otherwise specified in these rules. Outer-skin of hood and trunk/hatchback must not be altered.
- 9.4.4** Battery type, size, voltage, weight and location are unrestricted
- 9.4.5** Remote Reservoir shocks are permitted with a 25lbs increase in minimum weight. Note: any shock with an external reservoir is considered “remote”. If shocks with both high and low speed compression or high and low speed rebound adjustability are utilized, the minimum weight will increase to 75lbs.
- 9.4.6** Windshield must remain stock. All other windows may be replaced with polycarbonate/Lexan.
- 9.4.7** Any exhaust manifold and exhaust system may be used. All emission related devices may be removed or disabled. Catalytic converters may be removed.
- 9.4.8** Any air intake system in front of the throttle body (including mass air sensor) may be used, though stock throttle body must be retained.
- 9.4.9** L15B engine is required to use OEM turbo (part #18900-5AA-A01 or part #18900-5PA-A01)

## **9.5 H2 Factory Preparation Vehicle Preparation**

Vehicles may NOT follow section 7 Allowed Modifications except as stated otherwise in the 9.5.x sections below.

### **9.5.1 Engine**

- a)** Engines must be completely OEM and conform to the exact specifications found in the factory service manual.
- b)** Any OEM Honda or Acura ECU (including other models, domestic markets (JDM) and generations) may be used, and may be relocated ONLY to facilitate cage installation. Reprogramming of OEM ECU is allowed. Piggyback ECU’s that plug into the OEM ECU (e.g. Hondata) are allowed. VAFC (VTEC/Air/Fuel) controllers or other devices that perform the same function may be used. AEM Standalone ECU is permitted.
- c)** OEM air filter element may be replaced with aftermarket filter element utilizing OEM shape.
- d)** Vehicle must use factory unmodified OEM exhaust manifold.
- e)** Any exhaust system down stream of factory exhaust manifold may be used. All emission related devices may be removed or disabled.

### **9.5.2 Ignition**

- a) Section 7.2.1 & 7.2.2 allowed

### **9.5.3 Fuel Systems**

- a) Section 4.7, 7.3.1, and 7.3.3 allowed

### **9.5.4 Oil System**

- a) Section 7.4 allowed

### **9.5.5 Transmission**

- a) Section 7.5.1, 7.5.2, 7.5.3, 7.5.5 allowed

### **9.5.6 Engine Cooling**

- a) Section 7.6 allowed

### **9.5.7 Miscellaneous**

- a) Section 7.7.1 – 7.7.10 allowed

#### **9.5.8 Suspension**

- a) Minimum ride height shall be four (4) inches measured without driver at the lowest point of the rocker panel but not the welded seam.
- b) Single bodied adjustable shock absorbers of unrestricted origin may be used
- c) Remote Reservoir shocks are allowed with a 75lbs increase in minimum weight. Note: Any shock with an external reservoir is considered “remote” with the exception of the OEM shock, which does not require the additional 75lb minimum weight.
- d) S2000 permitted the use of S2000 CR springs and front and rear anti-roll bars.

#### **9.5.9 Brakes**

- a) Section 7.9 allowed

#### **9.5.10 Body**

- a) Section 7.10.1 through 7.10.10 allowed
- b) S2000 may utilize any composite “hardtop” that does not extend rearward more than half the length of the trunk
- c) S2000 permitted use of S2000 CR front bumper and rear wing.

#### **9.5.11 Interior**

- a) Section 7.11 allowed

#### **9.5.12 Wheels and Tires**

- a) Section 7.12 allowed
- b) Maximum wheel width is 8” (supersedes 7.13.5). Alternatively, factory OEM wheel is permitted.
- c) S2000 restricted to 235mm maximum tire width.

### **10. Allowed Modifications- H4 Only**

OEM, stock and/or factory refers to the same model, domestic market and generation as the listed vehicle. When allowed modifications permit other models, domestic markets and/or generations, it will be specified as part of the allowed modification.

#### **10.1 Engine**

**10.1.1** Engines may be balanced and/or blueprinted. Lightening of moving parts beyond what is necessary to balance is prohibited. Engine bearings may be replaced with aftermarket replacements and engine clearances (piston to wall, valve lash, etc.) are unrestricted and are considered blueprinting

**10.1.2** Engines may be bored to a maximum of .040 inch (1 mm) over standard bore size.

**10.1.3** Factory replacement pistons or the exact equivalent shall be used. Exact equivalent shall be defined as the same dome/dish/valve relief configuration, weight, ring thickness and location, and pin location as the OEM replacement piston. Wrist pins and method of retention must also conform to OEM specifications. In the event that a .040 factory replacement piston/wrist pin is not available, the oversize pistons/wrist pins shall not weigh any less than the largest size OEM piston for that engine.

**10.1.4** Piston rings are unrestricted but must be of proper OEM ring thickness.

**10.1.5** Cylinder head intake ports, exhaust ports, and intake manifold may be port matched but cannot be machined beyond one (1) inch into the head or intake.

**10.1.6** 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.

**10.1.7** Valve guide material is unrestricted. However, shape and size must remain the same as OEM.

**10.1.8** Compression may be increased one half (.5) a point greater than OEM number.

**10.1.9** Cylinder head gasket surfaces may be machined so long as it does not increase compression beyond the maximum value allowed for make and model.

**10.1.10** Timing gears must remain OEM. Cars equipped from the factory with plastic timing gears may replace them with metal gears so long as cam timing remains stock. OEM crank timing gear may be adjusted with an offset key back to stock position. Offset keys may be used with cam gears on SOHC engines only.

**10.1.11** The OEM Honda or Acura ECU must be used, and may be relocated ONLY to facilitate cage installation.

**10.1.12** Any OEM Honda/Acura chassis classified in H4 is permitted to install a B18A/B engine and transmission swap

- a) Minimum weight becomes 2500lbs
- b) Permitted to upgrade to Integra front knuckle/hub assemblies
- c) Permitted to update to Integra LS/GS 10.3” rotor and brake caliper

d) OEM Acura ECU for the B18A/B engine must be used. OBD0 equipped cars may update distributor and associated wiring to OBD1 or OBD2. This includes the use of a "jumper harness" to convert the OBD0 wiring of the stock ECU plugs to work with the OBD1 or OBD2 ECU. Additionally, OBD2 may also use a jumper harness to convert back to OBD1.

## 10.2 Suspension

- 10.2.1 Shocks and/or struts must conform to section 7.8.2 with a maximum listed retail price of \$4,000.
- 10.2.2 Limited to single or double adjustable (rebound and compression only).
- 10.2.3 Remote reservoir and/or external canister is prohibited.

## 10.3 Miscellaneous

- 10.3.1 Any battery of the same size, voltage, and weight as the original is required and must be installed in the original OEM location.
- 10.3.2 The maximum tire width size for H4 is 225mm

## 11. NASA Honda Challenge Series Championship

**11.1 Eligibility:** Please consult with your region for championship eligibility. Each region has a different number of events and may use a different system. You will be required to participate in a minimum number of races to qualify for an award.

### 11.2 Graphics and Identification

- 11.2.1 Required Honda Challenge Series graphics are available through your regional director.
- 11.2.2 All cars are required to display at least four (4) CCR-Compliant NASA racing stickers.
- 11.2.3 Numbers must be permanent and displayed on each side of the vehicle. Numbers should be a minimum of eight (10) inches tall and of contrasting color to their background. Additionally numbers should be displayed at the front and rear of the vehicle at a minimum of four (4) inches tall.
- 11.2.4 Class designation must be permanent and displayed on each side of the vehicle. Class designation should be a minimum of three (3) inches tall and of contrasting color to their background.
- 11.2.5 Rookie drivers must display CCR-Compliant Rookie markings.
- 11.2.6 Vehicles that do not display required decal packages will not be allowed to compete.
- 11.2.7 Vehicles may be disqualified if timing/scoring cannot read number and/or class. All decals, numbers, etc. must be permanent, such as vinyl or paint. Magnetics are not permitted.

### 11.3 Contingencies, Trophies and Other Prizes

- 11.3.1 See [www.nasaproracing.com](http://www.nasaproracing.com) for available contingencies, or contact your local regional director.

## 12. Appendices

### Appendix A: Contacting the National Auto Sport Association

NASA can be contacted via the web site <http://www.nasaproracing.com>. Specific NASA and Regional contact information is located at <http://www.nasaproracing.com/aboutnasa/regions.html>. Alternatively, one may contact NASA at:

NASA National Office  
P.O. Box 2366  
Napa Valley, CA 94558  
Phone: 510-232-NASA (6272) or FAX: 510-412-0549

### Appendix B

#### Specified Measurement

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;

- B.1 Calculating a mean average of at least three measurements from the corresponding parts found on other vehicles, or
- B.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 Honda Challenge Series Director.