Team Racing Endurance Challenge (TREC)

Official 2024 National Rules

(Rules subject to change)

Nov 1, 2023

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

TREC Regulations

1. Purpose

Tired of red tape and hassle just to go racing on a real track? TREC is a cool series where you don't need anything other than a car that meets safety specs and a great attitude to make racing FUN.
NO PREVIOUS RACING EXPERIENCE, NO COMPETITION LICENSE, NO MEDICAL.

Worried about stupid drivers banging into you? We have an endurance series where we treat everyone like an adult and come down hard on those who don't. We expect everyone to be mature enough to make good decisions so contact is not something that will be tolerated!

The intent of the TREC series is to host a fun, safe endurance racing competition. If you're not having fun in this series, you're doing it wrong.

2. Administration

2.1. Vehicle numbers

Vehicle numbers must be easily legible and of a contrasting color. For endurance races that run into darkness, a small light such as those used to illuminate license plates above the vehicle number are permitted and will help Timing and Scoring see the vehicle number, as will reflective vehicle numbers.

2.2. Timing transponders

Each team is required to obtain the proper transponder(s).

2.3. Driver Eligibility and Licenses

2.3.1 ~~TREC 1, 2, 3, 4: There is no requirement for a competition license, only valid state driver license (or, alternatively, an accepted racing license as outlined below) and a NASA TREC License ($20).~~ No medical application is required. However, all drivers must be in good physical condition as deemed by their physician to participate in auto racing. Some track experience is required beyond being a novice. Generally, intermediate experience or NASA HPDE3 is a good start. Check with your TREC series leader or Regional Director if you have any questions. Drivers who are significantly slower than the rest of the field or driving erratically may be excused from the race by the Race Director. ~~If any team enters a vehicle in TREC 1-4, but gets moved to TREC U, regardless of reason, their drivers all will be held to the license standard for TREC U.~~

~~2.3.2 A racing license is required for TREC U. Any one of the following are acceptable: NASA TREC, Time Trial, Instructor, or Competition. Additionally, SCCA, FIA, JAF, BMWCCA, et al. licenses are acceptable with approval from the Regional Director, or his designee.~~

2.3.2 A TREC license is required to participate in a TREC race. You may purchase a TREC license through your NASA profile for $20. Alternatively, a NASA Competition license, NASA Time Trial License or NASA instructor license also qualifies you for TREC competition.

2.3.3 Please note that certain cars in Appendix B are N/A (Not Allowed) because they are deemed too fast to be within the spirit of TREC. Cars not listed or listed but highly modified also may be deemed to be N/A by the regional director, to stay within the spirit of TREC. If you intend to bring one of these cars, you may not be able to race it in TREC, regardless of your license/experience status.

~~2.3.4 Once you complete four TREC events without incident, you may apply for a TREC competition license. Also, anyone that has driven in five (5) or more endurance races, outside NASA may apply for a TREC competition license through their local regional office or through NASA National. A TREC license is not required for TREC events at this time.~~

2.3.4 Once you have demonstrated during a NASA TREC competition that you possess the skills required for a complete TREC license, your TREC license will be upgraded to non-provisional status by your Regional Director.

2.3.5 Anyone who holds a TREC competition license and THEN completes six (6) NASA TREC events, may apply for a NASA provisional license (good for NASA sprint racing, Championships, WERC, etc). However, you must be able to pass the HPDE4 level checkout ride as the minimum prerequisite or attend a Competition Licensing School

2.4. Entry fees

The Team Captain (team owner) is responsible for paying all the fees and submitting all the proper paperwork**.** In addition, each driver must register as a driver and be listed as a driver on the owner's team.

2.5. Unauthorized drivers

If any person is found to have driven a vehicle on course that is not properly registered, all drivers of that vehicle will be subject to disciplinary action. Minimum penalty shall be exclusion from the event. Exclusion from the event may be accompanied by loss of finishing position and prize money.

2.6. Declaration

Each team must declare their team's name, a class, and a Team Captain (team owner) on their entry form when registering. Each Team Captain may only apply season points to one team entry. If a team name is not declared on their entry form, the team will be viewed as a new independent team.

2.7. Pit spaces / Markings

Competitors will not mark the track property with any type of permanent marking such as paint. Each team is responsible for their own space and its maintenance. **Any tape applied to any surface MUST be removed immediately after the race. Failure to do so will result in penalties to the team**.

3. Technical Eligibility

3.1. Eligible vehicles

All closed-wheel racecars and sports racers, with adequate safety equipment with a NASA annual inspection sticker may be permitted to enter, subject to approval of the event administration. All vehicles must display at least one NASA decal on each side, one on the front and one on the rear. No other current sanctioning body decals are permitted, except INEX and 600 Racing. Note: INEX Thunder Roadsters and Legends are considered to be closed-wheel vehicles.
3.1.2 There should be a session for us to determine your lap times during warm up, qualifying, practice. Classes will be made by grouping cars. For those that sandbag, you will be reclassed during the race. So, you should absolutely put your fastest driver in for this session.
3.1.3 As a guide on what you can expect to race against, refer to Appendix B to learn where we expect to class vehicles during TREC events.

3.2 Tires

You can use any street tire (DOT) that shows treadwear 180 (or greater) on the sidewall. Any car using a lower treadwear tire, competition tire or slick will be placed in the TREC U class.

3.3. Technical safety inspection

All cars are required to pass a NASA annual inspection and display an annual inspection sticker on the front windshield on the driver's side, lower corner. Entrants will be required to show proof of compliance with the safety rules listed in the CCR. It is the team owner's responsibility to ensure the vehicle and all the drivers and crew's safety gear meets safety standards and other NASA rules, or to obtain an allowance from the Race Director or Event Director.

3.4. Fuel tanks / cells

3.4.1 Vehicles must start with no more fuel than the OEM tank(s) holds, or a maximum of eighteen (18) gallons, whichever is less.
3.4.2 No vehicle may have more than two fuel OEM tanks or more than two fuel cells.
3.4.3 No vehicle may be capable of carrying more than thirty-four (34) gallons of fuel at any given time.
3.4.4 The term "filler hose(s)" in this section refers to those attached to the vehicle.
3.4.5 Filler hoses must be secured at each connection point with either a threaded connection or double hose clamps.

3.4.6 Filler hoses must take the most direct path between the tank opening and the filler neck.

3.4.8 Only one five-gallon can may be used to refuel the vehicle through a single fill point, at any given time.

3.4.9 A single external (to the fuel tank or fuel cell) container that fuel is stored in, or moves through, (e.g. swirl pots, vent cans, surge tanks, etc.) may be used, and that container shall not have a capacity greater then 1.5 liter (0.4 gallons). The container must be constructed of aluminum or stainless steel, with threaded fittings to stainless steel braided fuel hoses. It must be separated from the driver's compartment by a separate bulkhead. Any container over 1.5 liters (0.4 gallons) is another fuel cell and subject to fuel cell requirements.

3.4.10 Each fuel tank/cell is limited to one vent, which must be no larger than one (1) inch in diameter. All non-OEM vents must have a check-valve or “rollover” valve to impede fuel leakage.

3.6. Vehicle substitution

A team may substitute another vehicle before the start of the race, provided the vehicle has passed tech inspection, and the substitution has been approved by the Race Director. NOTE* Timing and Scoring will need to be notified of any car number and/or transponder number change.

3.6.1. If there was a timed session on track to determine qualifying order, then the substituted vehicle must start in the back of the whole field. Alternatively, they may be permitted to start in the back of their respective class providing: 1) it is a split grid based on class, and 2) the Race Director approves.

3.7 Night racing (Star TREC)

3.7.1. If the race may run past dusk, brake lights, headlights and taillights are mandatory. It is highly recommended that each vehicle has at least two headlights, two taillights, and two brake lights. If one light fails, the vehicle will not be black flagged providing, that there is at least one sufficiently working light of each type.

3.7.2. Any number of additional driving lights may be added to the vehicle providing that they illuminate in the forward direction. However, if the Race Director deems any lights to be excessive and/or a hazard, the vehicle may be black-flagged. Any offending lights must be permanently disabled or removed. Note- special lighting rules apply to the 25 Hours of Thunderhill; see that event’s supplementary regulations.

3.7.3 Roof-mounted lights are prohibited.

3.7.4 Using colored lights to identify the team’s vehicle at night is permitted, providing that the lights and colors do not confuse other drivers (e.g. no white light to the rear). No flashing or blinking lights are permitted, with the following exception. Any NASA approved or mandated flashing light for use by stalled drivers as a warning to other drivers (e.g JAWS) *and any brake/rain light(s) that blink under braking.*

4. Classes

4.1 The official classes are TREC 1, 2, 3, 4. TREC 1 is the fastest scored class. Teams will be classed based on a qualification session to determine which class you will be assigned. (Although, the Race Director can use any system they like in the interest of fun!) Remember, the faster you go, the higher the class, so keep mods cheap, and keep it fun.

Appendix B gives you a general guideline where your team could compete. This is the class for which you will register for the event. If all drivers had same level of skill, cars would be classed as such. However, because this format is to ensure fun, your final race classification will be based on your fastest driver’s qualification time. For example, If there is an inexperienced team with a fast car, it might register as TREC 1 but get classed for competition in TREC 4 based on lap times.

For example, classes could be broken up like this:
20 cars or less = 2 classes. Top 10 fastest in TREC 1, slowest 10 in TREC 2.
21 - 30 cars = 3 classes. Cars will be divided among TREC 1, TREC 2, TREC 3.
31+ cars = 4 classes. Cars will be divided among TREC 1, TREC 2, TREC 3, TREC 4.

Alternatively, the Race Director could manually break up all vehicles by time into the classes he/she feels will provide the best racing following your timed session. It is ultimately up to the Race Director.

4.3 Teams that are too fast will be put into “TREC U”. Any contact while passing will be YOUR fault regardless of reason. TREC U classed drivers **must** be extra careful picking their passing places. Additionally, you might win the race, but you won’t get points or a trophy.

4.4 If you’re turning lap times like a car with a power-to-weight ratio of less than 8:1 (NASA ST2-type car) WT/HP, you’re probably going to be put in the U class. You are welcome to detune before the event.

4.5 Sandbagger rule — If your race lap times become faster than your qualification time, the Director will likely move you to the next faster class.

4.6 The Director may consider group/class size, weather during “qualifying,” and any other factors. Any method chosen by the Director cannot be questioned, unless there was a mistake in calculations based on stated classing method.

4.7 Air Jacks / jacking systems — The use of any device other than a manual jack(s) or a manually operated hydraulic jack to raise the vehicle during competition is prohibited in TREC 1,2,3,4. Cars with air jacks that insist on using them will be relegated to TREC U.

5. Format

5.1. Grid

Pre-grid closes when the pace car leaves. Late vehicles must start in the back of the entire field or may be held to start from pit lane at the discretion of the Reentry Steward or Race Director.

5.2. Race length

The actual race length may vary and will end at the predetermined time of day or may run a specified length. The Race Director will determine the exact length and the end time before the start of the race. However, the Race Director reserves the right to adjust the race length should unforeseen circumstances present themselves. It is the competitor’s responsibility to get the applicable information from the Race Director as to the duration of the race. The official clock will start when the pace vehicle takes the course for the warmup lap(s), unless otherwise noted per event.

5.3. Race finish

The overall leader will be shown the checkered flag at the finish flag stand as soon as possible after the official race time has elapsed. There is usually, but not always, a “last lap” flag indication given by the Starter. Note — not all finish lines are directly in front of the finish flag stand.

5.4. Starting order

5.4.1. The Race Director will choose a starting method to determine the starting order. Methods are unrestricted, and include gridding based on season points (or reverse), a qualifying session, vehicle number, alphabetical, etc.

5.4.2. The starting method, as determined by the Race Director, cannot be questioned, or disputed. However, a competitor or team’s representative should notify the Race Director if there is an error in their assigned starting position based on the chosen starting method.

5.5. Leaving hot pits

Vehicles may be held from leaving the hot pits when the pace vehicle is on track. The stewards may hold a vehicle until the pack comes by, if they estimate that the vehicle cannot catch the end of the pack before reaching the incident.

5.6. Red flag

In case of a red-flag situation, all work on vehicles in the pits (hot pits and cold pits), including refueling, must be stopped. Drivers that choose to pit during a red-flag situation, will lose their position, and will not be permitted to enter the paddock until the course is returned to green. Teams may continue to work on vehicles that were in the paddock before the course went red, however they must not return to the hot pit lane or track until the green flag is displayed at the starter’s stand.

5.7. Repair on hot pit

Vehicles may be repaired on the hot pit in a safe location at the discretion of an official or with the approval of the Race Director. There shall be at least one jack stand under a vehicle if a crewmember(s) is working under the vehicle. The weight of the vehicle need not be on the jack stand. If repairs exceed 30 Minutes, the team will be asked to take the car to the paddock to finish the repair.

5.8. Full-course yellow

The pits are “closed” during full-course yellows. Any team already in the pit lane during a full-course yellow may continue working on their vehicle and exit the pit lane at the discretion of the pit out Marshall Once the last manned turn station, before the pit entrance, displays the double-yellow flags (or by any other defined indication), the pit lane will then be “closed.” If a vehicle enters the pit lane during a full-course yellow situation, the driver has two options:
1. Park in the team’s pit space and do nothing until the green flag is displayed at the starter’s stand. The driver may not exit the vehicle (unless due to an emergency or instructed to do so by an official) and the team shall not work on the vehicle.
2. Continue through the pit lane and rejoin the field at the discretion of the re-entry Marshal based on safe-release conditions.
In the event of a full-course yellow, the pace car will pick up the overall leader regardless of class.

6. Scoring

6.1. The finishing position will be determined by the total number of laps completed, whether or not the vehicle is running at the end of the race. If two vehicles have the same number of laps completed, the one that crossed the line first will be scored ahead. If two vehicles break down on the same lap, then the vehicle that completed the most distance since the green flag will be awarded to higher finishing position. “Distance” is measured from the starting line and does not include the length of the grid or differentials in grid starting positions.

6.2. Provisional results may be announced at the track along with the trophy presentation. Results are not official until marked as such and published by the NASA office.

6.3. Season points will be awarded as per the CCR. Teams are not permitted to drop any races from their season points, unless otherwise posted from the NASA office. Season points values follow the defined structure in the CCR, or check with your Region.

6.4. Vehicles that are penalized a certain number of laps resulting in a tie for the number of laps completed will be scored ahead of the teams that actually did that number of laps. In other words, the tie breaker will go to the penalized team. If two or more teams are penalized a certain number of laps that results in two or more of them scored as a tie, then they will be placed in the same order in which they were before any penalties were assigned.

7. Safety

7.1. Compressed gas cylinders must always remain behind the pit wall while the event is under way. Use of person-mounted gas cylinders (e.g. SCUBA tank, etc.) for powering a pneumatic tool is permitted, providing each cylinder only powers one tool at any time. Cylinders must be carried or mounted upright. Only the crewmember wearing the mounted cylinder may operate the tool attached.

7.2. Reckless or negligent behavior by any driver or crewmember, causing damage to themselves, equipment, pit surface, track, or other drivers’ equipment or persons, can result in harsh penalties. If a crewmember is injured during a pit stop, the team may be disqualified.

7.3. Minors are not permitted in the pit lane. Exceptions to this rule may only be granted under the rules listed in the CCR, and with the approval of the Race Director or Regional Director.

7.4 “Crew” helmets are permitted and encouraged.

8. Pitlane / Pitstops / Refueling / Drive Time

8.1. Pit space

All competitors are required to keep two (2) gallons of water, and at least one five-pound (5 lb.) or larger BC or ABC rated fire extinguisher (with a gauge indicating fully charged), and at least 5 pounds of oil absorbent in their pit space. CO2 and Halon / Halotron/ Novec 1230 are highly recommended because they do not leave a mess to clean up. Additionally, if Dry Chem or Sodium Bicarbonate is used, there are chemicals such as vinegar that can be kept on hand to remove such chemicals.

Sharing of required equipment, such as fire extinguishers, is not permitted between pit spaces, even for the same team. The team owner is responsible for any damages to the track, pits, or paddock.

8.1.1 All pit stops made during competition where fuel is added to the vehicle require the vehicle to be stationary in your pit space a minimum of 5 minutes. (Timers are available at pit in for teams that need to borrow one.)

8.1.2 The number of pit stops that must be made during a race will be 1 less than the total number of hours the race is declared to last. (Example: A four hour TREC race will require no less than 3 pit stops.)

8.2. Refueling

8.2.1. Each team is required to dump the contents of at least one NASA-approved 5-gallon can of fuel into their vehicle during the race. The contents of two (2) NASA-approved 5-gallon containers may be put into the vehicle during any pit stop. The containers may not be refilled during a pit stop and put into the vehicle (i.e. if the team has two containers half full, that is all they can put in during that stop). Note — six-gallon (or other) containers, sold as “5-Gallon” fuel containers are not legal. All refueling during the race shall take place in the hot pit.

8.2.2. All refueling must be done using NASA approved* 5-gallon containers, which must be labeled “FUEL.” All fuel containers shall remain capped when not in use. The cap may include a hose if the hose is capped when not in use. Shutoff valves are considered to be a legitimate cap. Fuel container vent hoses of less than 3/16th inside diameter need not be capped. Vent lines of larger diameter must be capped or “pinched off” to prevent spillage.

8.2.3 Methanol fuel is not permitted.

8.2.4 Teams are permitted one (1) 55-gallon drum in their paddock space at any given time. Additional barrels of fuel may be stored in the area designated by track personnel.

8.2.5 Storing fuel in containers larger than five 5-gallons in a team’s cold pit space is prohibited.

8.2.6 A standard carpet mat made for wiping shoes when entering a building is not considered a refueling device. It may be placed on the ground before the vehicle enters the pit box but must be removed after the vehicle leaves. Fire extinguishers are not considered refueling equipment.

8.2.7 Refueling begins as soon as any refueling device crosses over the pit wall. Items under the direct control of a team member used for refueling may be placed on the pit wall once the vehicle enters the pitlane. The vehicle must be stopped before any refueling item may be brought over the wall, or taken from the wall, into the hot pit lane. Only one fuel jug may be over the wall at a time. There is no requirement for the engine or master power switch to be on or off.

8.2.8 Refueling has ended when all implements of fuel handling (cans, jugs, hoses, catch/vent cans, or spill trays, etc.) are behind the cold pit wall.

8.2.9 Teams are NOT permitted to perform any work on the vehicle during refueling. Teams may change drivers during refueling.

8.2.10 All refueling during a pit stop must be performed as the first task in that stop. If a team works on the vehicle, then wishes to add fuel, they must complete a lap, then pit for fuel.

8.2.11 NASA-approved refueling cans must use a clear filler hose. When “full,” the fuel may be in the neck of the can, but not above the filler neck (e.g. not showing in the hose).

8.2.12 Vehicles with 18 gallons or more of fuel capacity must report to tech before the race begins to verify the fuel tank(s) is/are empty. Once verified empty, 18 gallons can be added, and the fill spout will be sealed for the start of the race.

8.2.13 Two, properly dressed, fuelers are allowed over the wall while refueling, as well as one fireman holding a fire extinguisher 7 to 10 feet away from the refueler(s) so as not to be engulfed in any flash fires that may occur.

8.2.14 Driver changes during refueling are permitted. The driver may remain in the car or may exit to assist with the next driver. Alternatively, the driver may assist with refueling, but will be counted as one of the two permitted refuelers. No more than 5 total people over the wall during any pit stop including drivers and every person must serve a function.

8.2.15 Seat inserts, radios, cameras, adjustments, data cards, etc. all must wait until fueling has stopped after the fueling gear is behind the pit wall. You can’t do anything to the vehicle while fueling.

8.3. Refueling equipment

8.3.1. All TREC classes may use a dry-break valve (male) Redhead – 1.75-inch probe with 1.50-inch hose barb, 1.25-inch I.D. Bore. *Dry-break / hose must be attached to a NASA approved 5-gallon container. See appendix A.* NOTE: The additional expense of dry-break systems is not required during a 5-minute pit stop.

8.3.2. All classes are prohibited from using any type of “quick-fill method.” The definition of “quick-fill method” (for the sake of prohibition) is refueling a vehicle using any of the following items: Fuel containers other than the standard approved* 5-gallon plastic fuel cans, specialized nozzles (aircraft), non-approved “Dry Breaks” (Nextel Cup / IMSA), fuel pumps (of any type), electric power tools, wheels (for any purpose), support stands, pressurized containers, vacuum tank/cells or other devices deemed, by the Race Director, to be outside the spirit and intent of these rules. Fixed-position elevated fueling rigs are prohibited. The use of hoses, funnels, clamps, PVC & ABS fittings, valves, and pipes, threaded connectors, roofing supplies, various plumbing supplies, and most similar items found at a local hardware store are generally permitted, unless otherwise restricted.

Note — “Approved standard 5-gallon plastic fuel containers” are shown in Appendix A. Any container more than 5 gallons is prohibited.

8.4. Careless Handling of Fuel

All fuel collected in a pan or overflow container must be returned to a fuel can. Catch cans are required and must be a minimum of 12-inch round or square with a 3-inch minimum lip made of metal or plastic. Careless handling of fuel will result in harsh penalties. Spilling fuel is considered careless handling, even if it spills into a catch pan or mat on the ground. Fuel spills are typically the result of “careless handling of fuel” and should be treated as such. For the purpose of clarification, a couple drips of fuel” during refueling doesn’t typically constitute careless handling of fuel. Pitt Lane officials will determine when fuel has been handled carelessly as defining an amount or size of a fuel spill is impractical. Careless handling of fuel may occur at any time, not just during a pitstop. Fuel that is captured in an overflow container or normal overflow from the vehicle while exiting the pit space is not necessarily considered careless handling.

8.5. Refueler attire

Refuelers must wear safety equipment equivalent to the driver (except head neck restraint) as per the CCR (i.e. Nomex suit, gloves, shoes, and helmet) during refueling. Any crewmembers over-the-wall during refueling are considered refuelers and subject to proper attire. All refuelers with open faced helmets must wear a balaclava (head sock) while refueling whether they have any facial hair or not.

8.5.1 Exception to the refueler’s helmet requirement: Refuelers may, utilize a Snell SA2000 (or newer)

rated helmet, for refueling. Standard crew helmets commercially manufactured for auto racing may be used for refueling providing a balaclava is worn and eye protection is used.

This is an example of a legal crew helmet for auto racing.

8.6. Fire hazards

Smoking or open flames are prohibited in the hot pits. The Race Director must approve any repairs that may create a fire hazard (e.g. welding, grinding). No heaters of any kind are permitted in the pit lane without the approval of the Race Director. [Intent: Electric oil filled, self-contained “radiator-style” heaters may be approved, however most heaters that have exposed heating elements (glowing red) likely will not be approved.]

8.7. Tire changes

8.7.1. Teams may change only one tire per pit stop in the hot pits.

8.7.2. Rotating tires is permitted, providing that all tires on the vehicle when it leaves the pit stop were the tires that were on the vehicle when it came in for that same stop. Mixing of *rules in section 8.7 not* permitted. [For example: A team cannot rotate the left side tires (front to rear), then change one right side tire. In any given pit stop, a team may change one tire, OR may rotate any of the tires, but not both.]

8.7.3 Only one tire-changing tool may be used at a time. (Impact gun, lug star, etc). Cordless, electric power tools are permitted.

8.7.4 Only one side of the car may be jacked up at a time for the purpose of tire changes.

8.7.5 Rotating tires is permitted.

8.8. Pitlane

8.8.1. The pitlane shall always remain clear. This means that crewmembers must stand either behind the pit wall or against the trackside wall until their vehicle is in the hot pit lane. No one except officials and authorized media is permitted to stand in the pitlane unless their vehicle has entered the pitlane starting at the location of the invocation of the speed limit.

8.8.2. Only crewmembers, officials, and authorized media are permitted to be at the trackside pit wall. Crewmembers are only permitted to remain at the trackside wall for the purpose of signaling their driver. Spectating from the trackside pit wall is prohibited. Additionally, no one is permitted to be in the hot pit lane or near the trackside wall until after the initial green flag has been displayed and all the vehicles have passed the first corner.

8.9. Pit speed limit

The speed limit in the pit lane is 25 mph. Unless otherwise indicated, the speed limit is in force from the first occupied pit box to the last occupied pit box, unless otherwise marked and specified.

8.10. Drive Time

The Maximum Driver Stint allowed is 2 hours with at least an hour rest before the next stint.

9. Suggested penalties

Penalties are not fun and require event officials to go against the spirit of the event, therefore if a penalty is necessary, you're probably going to get to enjoy one of the several unpleasant experiences below. NASA uses one of two basic systems. 1) Penalties issued after the race by subtracting laps. 2) Timed stop-and-go penalties for each infraction. Any penalty that lists "laps" can be applied to the "timed stop-and-go" system (No. 2) by substituting the word "minute(s)" for the word "lap(s)." (e.g. a 5-lap penalty translates to a 5-minute penalty, if using system No. 2). Note: If system No. 2 is used and it's too late in the race to issue the full-time penalty, then the race results will be adjusted to penalize that team the assigned time penalty, plus 30 seconds.

9.1. Administration

1. Unexcused absences from the driver's meeting may result in gridding last or being excluded and/or disqualified. Other penalties may apply.
2. Failure of a driver to properly register before going on track will result in ejection and disqualification of the entire team.
3. Crewmembers failing to obtain the proper wristband and/or other credential may result in that person's exclusion from the event.
4. Failing to pit after being shown two open black flags, accompanied by a sign displaying the team's vehicle number, will result in the loss of credit for subsequently completed laps.

9.2 Safety

1. Spilling or careless handling of fuel in the pitlane will result in a five-lap (or 5-minute stop-and-go) penalty.
2. Working under a vehicle without a jack stand(s) will result in a one-lap (or 1-minute stop-and-go) penalty.
3. Speeding in the paddock will result in at least a one-lap (or 1-minute stop-and-go) penalty.
4. Speeding in the pitlane will result in at least a one lap (or 1-minute stop-and-go) penalty.
5. Refuelers failing to wear proper attire during refueling may result in penalties ranging from a warning to a one-lap (or 1-minute stop-and-go) penalty for each offense.
6. Smoking, open flames, unapproved welding, grinding, etc. will result in at least a $50 fine.
7. Failing to properly man a fire extinguisher during a refueling stop will result in a one-lap (or 1-minute stop and go) penalty.
8. Working on the vehicle while refueling may carry a penalty of at least one lap (or 1-minute stop and go).
9. Unauthorized refueling in a location other than the pitlane during the race, including when the track has been "red flagged" will result in a 10-lap (or a 10-minute stop-and-go) penalty.

9.3. On-Track Conduct

1. Pass under double standing yellow will result in a two-lap penalty (or 2-minute stop-and-go) issued after the resumption of the green flag.
2. Pass under single standing yellow will result in at least five-lap or 5-minute stop-and-go penalty, issued during green flag conditions.
3. Passing under waving yellow: at least a ten-lap penalty (or a 10-minute stop-and-go).
4. Over-driving a waving yellow (i.e., too fast): (without emergency personnel present) — at least a 20-lap penalty (or a 20-minute stop-and-go).
5. Over-driving a waving yellow (i.e., too fast, losing control): (reported by on-scene emergency personnel) will result in a minimum of 30-lap penalty (or 30-minute stop-and-go) in addition to excluding the offending driver from the remainder of the event.
6. Yellow flag violations with incident causing damage: Any incident, causing any damage to any vehicle including the offender's vehicle, in a section of track under control of any local yellow flag, will result in the immediate disqualification of the offender's team entry. Track surface conditions will be taken into account.
7. Yellow flag violations with incident causing injury: Any incident, causing any injury to any person including the offender, in a section of track under control of any local yellow flag, will result in the immediate and permanent ejection of the offender from NASA. Track surface conditions will be taken into account.

8. **Passing and Body Contact** In a passing situation both drivers must share the road and must not make moves to impede a pass. This does not alleviate the responsibility of the overtaking driver as referenced in section 25.4.1 of the NASA CCR.
9. Any driver screwing around, driving dangerously, causing body contact, or generally being a problem will be immediately introduced to the penalty section!
10. **No blocking**! You get ZERO MOVES. That means no defending your line either. If someone is on the inside of the corner, MAKE ROOM! Because of this rule, you'll get them back on the next corner! Think of this as fun and courteous racing. (Note — This is different from the NASA CCR)
11. All Penalties are at the discretion of the Race Director and may be more or less.

9.4. Miscellaneous suggested penalties

1. Changing more than one tire per stop (except in classes where tire changing is unrestricted) will result in a two-lap penalty, per tire in excess of what is permitted, (or a stop-and-go of 2-minutes per tire in excess of what is permitted).
2. Refueling in any area other than the pitlane (when applicable) will result in a 10-lap penalty (or a 10-minute stop-and-go).
3. Not meeting fuel stop requirements will result in at least a 10-lap penalty (or a 10-minute stop-and-go).
4. Failing to comply with the pit space requirements (e.g., proper fire extinguisher, 5 lbs. of absorbent, etc.) will result in a $50 fine per missing or insufficient item.
5. Failing to use boards under loaded jackstands on any asphalt surface will result in a one-lap penalty (or a 1-minute stop-and-go). Additionally, the team will be billed for any damage to the asphalt.

Appendix A

A1.0 Intent

It is the intent of this section to further clarify rules regarding “NASA approved standard 5-gallon plastic fuel containers,” and associated allowances under these rules, for all applicable classes.

A2.0 Approved Containers

NASA approved containers are limited to “5-gallon containers” shown below. These containers might hold slightly more than 5 gallons, as they come from the factory. Note — no modifications are permitted to increase the capacity of these cans.

LEGAL CONTAINER REGARDLESS OF BRAND

LEGAL CONTAINER REGARDLESS OF BRAND

LEGAL HUNSAKER BRAND ONLY. Specified fuel jug and approved accessories are permitted.
No modifications may be made to any approved Hunsaker jug or accessory. Any hoses may be used.

P/N HUN-3005-225

180 J-pipe Stainless Steel

180 degree Dumpcan J-pipe extension

A2.1 Approved Dry Break System for ALL TREC classes.

P/N H-PP125M

P/N H-PP125FRM Coupler

A3.0 Examples of Illegal 6+ gallon Containers

	
NOT LEGAL CONTAINER REGARDLESS OF BRAND	NOT LEGAL CONTAINER REGARDLESS OF BRAND

Appendix B - TREC Base Classing

NA = Not Allowed
U = Unlimited
All Classes shall have 180 treadwear tires or higher to be considered for TREC 1,2,3,4. Any other tire is TREC U

Appendix B is a baseline. If your team is too fast relative to other cars and drivers in your class or if your team is stacked with pro drivers, expect to be moved to a faster class during the race at the discretion of the Race Director. Your team should register in the faster class for future TREC races.

Restrictors or low-power tunes are recommended for high-power cars. For example, a 450-hp ST1 car that is detuned to 300 hp could fit in a TREC class.

Sanctioning	Class	TREC Class
NASA	944 Spec	3
NASA	American Iron	1
NASA	American Iron Extreme	NA
NASA	CMC	2
NASA	GTS1	4
NASA	GTS2	2
NASA	GTS3	1
NASA	GTS4	U
NASA	GTSU	NA
NASA	HC1	2
NASA	HC2	3
NASA	NP01	1
NASA	Spec3	3
NASA	SpecE30	4
NASA	SpecE46	2
NASA	Spec Miata	4
NASA	Spec Iron	2
NASA	SU	NA
NASA	ST1	NA
NASA	ST2	U
NASA	ST3	1
NASA	ST4	2
NASA	ST5	3
NASA	ST6	4
NASA	TRGTR	2

Make	Model	Class	Make	Model	Class
Acura	CL 2.2L	4	Audi	TT (225 hp)('02-'06)(AWD)	3
Acura	CL V6	4	Audi	TT (250 hp)('04-'06)(AWD)	3

Acura	CL-S	4
Acura	CL-S (6 spd)	4
Acura	Integra 1.6L ('86-'89)	4
Acura	Integra 1.8L (non-VTEC)	4
Acura	Integra GS-R	4
Acura	Integra Type-R	3
Acura	NSX 3.0L ('91-'96)	1
Acura	NSX	1
Acura	RL ('05-'07)	4
Acura	RL (pre'05)	4
Acura	RSX	4
Acura	RSX-S	3
Acura	TL-S ('02-'03)	4
Acura	TL (pre '04)	4
Acura	TL ('04-'05)	4
Acura	TL 3.2L ('06-'07)	4
Acura	TL Type-S 3.5L ('07-'08)	3
Acura	TL 6-spd MT SH-AWD ('10-'11)	2
Acura	TSX ('04-'07)	4
Alfa Romeo	164 ('91-'93)(FWD) (183 hp)	4
Alfa Romeo	1600 Spider	4
Alfa Romeo	2000 Spider	4
Alfa Romeo	2600 Spider	4
Alfa Romeo	Milano 2.5L ('87-'89)	4
Alfa Romeo	Milano 3.0L ('87-'89)	4
Audi	A3 2.0T (200 hp)('06-'07)	4
Audi	A3 3.2 AWD (250 hp)('06-'07)	4
Audi	A4 1.8T (150 hp)('97-'00)	4
Audi	A4 1.8T (150 hp)(AWD)('97-'99)	4
Audi	A4 1.8T (170 hp)	4
Audi	A4 2.0T (197 hp)('05-'07)	4
Audi	A4 2.0T AWD (200 hp)('05-'07)	4
Audi	A4 2.8L (190 hp)	4
Audi	A4 3.0L (220 hp)	4
Audi	A4 3.2L (255 hp)(AWD)('07)	3
Audi	A6 2.7T (AWD)	4
Audi	A6 4.2L ('00-04)(AWD)	4
Audi	A6 4.2L ('05-'06)(AWD)	3
Audi	A6 4.2L ('07)(AWD)	3
Audi	A8 4.2L (AWD)('97-'03)	3
Audi	A8 4.2L (AWD)('03-'06)	3
Audi	A8 4.2L (AWD)('07)	3
Audi	A8 6.0L (AWD)('05-'07)	2
Audi	Coupe (110 hp)	4
Audi	Coupe (164 hp)	4
Audi	RS 4 (4.2L) (AWD)('07)	1
Audi	S4 ('03-'07)(AWD)	2
Audi	S4 (pre '03)(AWD)	3
Audi	S8 ('01-'03)(AWD)	2
Audi	TT (180 hp)('00-'06)	4
Audi	TT Quatro 3.2L ('08-'09)(AWD)	2
Austin	Mini 1L (<40hp)	4
Austin	Mini 1L, 1.1L (40 to 47hp)	4
Austin	Mini Cooper (55hp)	4
Austin	Mini Cooper 1071S	4
Austin	Mini Cooper 1275S	4
BMW	128i Coupe ('08-'09)	3
BMW	135i Coupe ('08)	2
BMW	1 M Coupe ('11)(3.0L turbo)	1
BMW	2002 ('68-'74)	4
BMW	2002 ('75-'76) (2403 lb)	4
BMW	2002tii	4
BMW	318 1.8L (E30)(pre-'92)	4
BMW	318 (E36)('92-'98)(1.8L & 1.9L)	4
BMW	318 ti ('95-'99)	4
BMW	323 ('98-'00)(2.5L)	4
BMW	325e (121 hp)	4
BMW	325 (E30)('87-'91)(168hp)	4
BMW	325is (E30)('87-'91)(168hp)	4
BMW	325ic ('92)(168 hp)	4
BMW	325 ('92-'95)(189 hp)	4
BMW	325 ('01-'06)(2.5L184 hp)	4
BMW	325i ('06)(3.0L 215hp)	4
BMW	328 2.8L ('96-'00)	4
BMW	328 ('07-'08) (3.0L 230 hp)	4
BMW	330 ('01-'06)(225hp)	4
BMW	330 ('06)(255hp)	3
BMW	335 3.0L ('07-'08)	1
BMW	5 series (<226hp)(RWD)(inc '07)	4
BMW	5 series (RWD)('08)	4
BMW	540	3
BMW	M Coupe/Roadster (240hp)	3
BMW	M Coupe (315 hp)	1
BMW	M Roadster (315 hp)	1
BMW	M3 (E30)(pre-'89)	3
BMW	M3 (E30)('89-'91)	4
BMW	M3 (E36)('95-'99)	3
BMW	M3 (E46)('01-'06)	1
BMW	M3 (E90, E92, E93)('08-'11)	1
BMW	M5 E28,E34('85-'93)	3
BMW	M5 E39 ('00-'03)	1
BMW	M5 E60 ('06-'08)	NA
BMW	M6	4
BMW	M6 ('06-'08)	NA
BMW	MINI Clubman S ('08-'10)	4
BMW	MINI Cooper ('01-'04)	4
BMW	MINI Cooper ('05-'10)	4
BMW	MINI Cooper ('11-'12)	4
BMW	MINI Cooper S ('02-'04)	3
BMW	MINI Cooper S ('05-'10)	3

Make	**Model**	**Class**
BMW	MINI Cooper Works ('06-'08)	3
BMW	MINI Cooper Works ('09-'10)	2
BMW	Z3 4-cyl	4
Chevrolet	Corvette '63-'82 (>425 hp)	1 - 4
Chevrolet	Corvette '63-'82 (200hp)	1 - 4
Chevrolet	Corvette C4 ('85-'91)	2

BMW	Z3 6-cyl (2.5L)	4
BMW	Z3 6-cyl (2.8L)	4
BMW	Z3 6-cyl (3.0L)	3
BMW	Z4 2.5L	4
BMW	Z4 3.0L ('03-'05)	3
BMW	Z4 3.0L (215 hp)('06-'08)	4
BMW	Z4 3.0L (255 hp)('06-'08)	3
BMW	Z4 M ('06-'08)	1
BMW	Z4 sDrive30i ('09-'11)	3
BMW	Z4 sDrive35i ('09-'11) (turbo)	1
BMW	Z4 sDrive35is ('11) (turbo)	1
BMW	Z8	1
Buick	Gran Sport 455 ('70)	2
Cadillac	Catera	4
Cadillac	CTS 2.8L ('05-'07)	4
Cadillac	CTS 3.6L ('03-'07)	4
Cadillac	CTS-V ('04-'07)	1
Cadillac	CTS-V ('09-'11)	NA
Cadillac	CTS-V Sports Wagon ('11)	NA
Cadillac	STS (4.6 V8) AWD ('05)	3
Cadillac	STS (V6)('05-'07)	4
Cadillac	STS (V8)('05-'07)	3
Cadillac	STS-V ('06-'07)	2
Cadillac	XLR ('04-'07)	2
Cadillac	XLR-V 4.4L V8 ('07)	1
Caterham	Super 7 (240 hp)	NA
Chevrolet	Aveo ('04-'07)	4
Chevrolet	Camaro 3.1L	4
Chevrolet	Camaro 3.4L	4
Chevrolet	Camaro 3.8L	4
Chevrolet	Camaro 5.0L carb (170 hp)('87)	4
Chevrolet	Camaro SS ('98-'02)	2
Chevrolet	Camaro SS ('96-'97)	3
Chevrolet	Camaro SS ('10-11)	1
Chevrolet	Camaro SS ('12)	1
Chevrolet	Camaro Z28 ('98-'02)	3
Chevrolet	Camaro Z28 (pre '98)	3
Chevrolet	Camaro ZL1 ('12)	NA
Chevrolet	Cavalier	4
Chevrolet	Cavalier Z24	4
Chevrolet	Cobalt 2.2L ('05-'08)	4
Chevrolet	Cobalt 2.4L ('06-'08)	4
Chevrolet	Cobalt SS 2.0L (S/C)('05-'07)	4
Chevrolet	Cobalt SS (turbo)('08)	2
Chevrolet	Corvair (140hp)	4
Chevrolet	Corvair (95,100hp)	4
Chevrolet	Corvair Corsa Turbo	4
Chevrolet	Corvair Monza GT Spyder	4
Chevrolet	Corvette '63-'82 (>200, <330 hp)	1 - 4
Chevrolet	Corvette '63-'82 (>330,<425 hp)	1 - 4
Chevrolet	Corvette C4 ('92-'96) (LT1)	2
Chevrolet	Corvette C4 (LT4 option) (330 hp)	1
Chevrolet	Corvette C5 (inc. FRC w/o Z51)	1
Chevrolet	Corvette C5 (all w/ Z51)	NA
Chevrolet	Corvette C6 ('05-'07)(Z51 ok)	NA
Chevrolet	Corvette C6 ('08)(LS3)	NA
Chevrolet	Corvette GS ('96)	1
Chevolet	Corvette GS ('10+)	NA
Chevrolet	Corvette Z06 ('01-'04)	NA
Chevrolet	Corvette Z06 ('06-'08)	NA
Chevrolet	Corvette ZR-1	1
Chevrolet	Cruze 1.4L Turbo ('11)	4
Chevrolet	Cruze 1.8L ('11)	4
Chevrolet	HHR SS ('08-10)	3
Chevrolet	Impala SS ('04-'05)	4
Chevrolet	Impala SS ('06-'08)	4
Chevrolet	Impala SS ('94-'96)	4
Chevrolet	Monte Carlo 3.9L LTZ ('06)	4
Chevrolet	Monte Carlo SS 3.8L ('04-'05)	4
Chevrolet	Monte Carlo SS 5.3L ('06-'07)	3
Chevrolet	Monte Carlo SS (pre '04)	4
Chevrolet	S10 Extreme (180hp)	4
Chevrolet	Sonic (1.4L turbo)('12)	4
Chevrolet	Sonic (1.8L)('12)	4
Chrysler	300 (3.5L) ('05-'07)	4
Chrysler	300C (5.7L)('05-'07)	3
Chrysler	300C (5.7L) (AWD)('05-'07)	3
Chrysler	300C SRT8 ('05-'07)	2
Chrysler	Cirrus 4-cyl	4
Chrysler	Conquest (turbo)	4
Chrysler	Conquest Tsi (turbo)	4
Chrysler	Crossfire (215hp) ('04-'07)	4
Chrysler	Crossfire SRT6 ('05-'06)	1
Chrysler	PT Cruiser	4
Chrysler	PT Cruiser GT	4
Datsun	510 (96 hp)	4
Datsun	510 (L20B swap)	4
Datsun	1600 Roadster ('66-'70)(96hp)	4
DeTomaso	Pantera	2
Diasio	D962R	NA
Dodge	Caliber RT 2.4L AWD ('07-'08)	4
Dodge	Caliber SRT4 2.4L Turbo ('07-'08)	2
Dodge	Challenger R/T ('09-'10)	2
Dodge	Challenger SRT8 ('08-'10)	2
Dodge	Charger 3.5L ('06-'07)	4
Dodge	Charger 5.7L ('06-'07)	3
Dodge	Charger SRT8 ('06-'07)	2
Dodge	Magnum RT	4
Dodge	Magnum RT AWD	3
Dodge	Magnum SRT8	2

Make	**Model**	**Class**
Dodge	Neon DOHC Coupe	4
Dodge	Neon DOHC Sedan	4
Dodge	Neon SOHC Coupe	4
Dodge	Neon SOHC Sedan (1st gen)	4
Dodge	Neon SOHC Sedan (2nd gen)	4
Ferrari	Testarossa	NA
Fiat	124 Spider 1400	4
Fiat	124 Spider 1600	4
Fiat	124 Spider 1800	4
Fiat	124 Sport Spider 2000	4

Dodge	Neon SRT4 ('03-05)	4	Fiat	128 (55-60 hp)	4
Dodge	Neon SRT4 ACR	3	Fiat	500 ('12)(USA)	4
Dodge	Shelby Charger (110hp)	4	Fiat	X1-9 1.3L	4
Dodge	Shelby Charger (146hp)	4	Fiat	X1-9 1.5L	4
Dodge	Shelby Charger GLHS (turbo)	4	Fiat	X1-9 2000	1
Dodge	Shelby Lancer	4	Ford	Contour SVT	4
Dodge	Shelby Omni GLH (146 hp)	4	Ford	Escort 1.9L	4
Dodge	Shelby Omni GLHS	4	Ford	Escort 2.0L	4
Dodge	Stealth (DOHC)	4	Ford	Escort GT (1.8L)	4
Dodge	Stealth (SOHC)	4	Ford	Escort ZX2	4
Dodge	Stealth Turbo ('91-'93)(AWD)	3	Ford	Escort ZX2 S/R	4
Dodge	Stealth Turbo ('94-'96)(AWD)	2	Ford	EXP 1.6L ('82-'85)	4
Dodge	Stratus 4-cyl	4	Ford	F150 SVT Lightning	4
Dodge	Stratus RT	4	Ford	Festiva	4
Dodge	Viper	NA	Ford	Focus (2.0L 16v) ('05-'08)	4
Dodge	Viper ACR	NA	Ford	Focus (2.0L 16v)('00-'04)	4
Eagle	Talon 2.0L (135-140hp)	NA	Ford	Focus (2.0L 8v)('00-'02)	4
Eagle	Talon Turbo ('90-'94)	4	Ford	Focus (2.3L 16v)('04)	4
Eagle	Talon Turbo ('95-'98)	4	Ford	Focus ST 2.3L 16v ('07)	4
Eagle	Talon Turbo AWD ('90-'94)	4	Ford	Focus SVT (2.0L)('02-'04)	4
Eagle	Talon Turbo AWD ('95-'98)	4	Ford	Focus ZX4 ST (2.3L)('05-'06)	4
Elan	NP01 (NASA Prototype)	1	Ford	GT	NA
Ferrari	308	3	Ford	Mustang Boss 302 ('12)	NA
Ferrari	328	1	Ford	Mustang Cobra ('93)	4
Ferrari	355	NA	Ford	Mustang Cobra ('94-'95)	4
Ferrari	360	NA	Ford	Mustang Cobra ('96-'98)	2
Ferrari	430	NA	Ford	Mustang Cobra ('99 & '01)	2
Ferrari	550	NA	Ford	Mustang Cobra R ('00)	1
Ferrari	612	NA	Ford	Mustang Cobra R ('93)	3
Ferrari	348 (<305 hp)	2	Ford	Mustang Cobra R ('95)	2
Ferrari	348 (320 hp)	1	Ford	Mustang Cobra SVT ('02+)	1
Ferrari	360 Challenge	NA	Ford	Mustang GT ('05-'06)	2
Ferrari	456GT	NA	Ford	Mustang GT ('07-'08)	2
Ferrari	575M	NA	Ford	Mustang GT ('10)	2
Ferrari	Enzo	NA	Ford	Mustang GT ('11)	1
Ferrari	F430	NA	Ford	Mustang I4	4
Ferrari	Superamerica	NA	Ford	Mustang I4 turbo	4

Make	**Model**	**Class**	**Make**	**Model**	**Class**
Ford	Mustang I6	4	Honda	Civic EX 1.6L ('92-'95)	4
Ford	Mustang Mach 1	2	Honda	Civic EX 1.6L ('96-'00)	4
Ford	Mustang SVO ('84-'86)	4	Honda	Civic EX 1.7L ('01-'05)	4

Ford	Mustang V6 (pre-'99)	4
Ford	Mustang V6 ('99-'04)	4
Ford	Mustang V6 ('05-'09)	4
Ford	Mustang V6 ('10)	4
Ford	Mustang V6 ('11)	2
Ford	Mustang V8 ('64-'68 <272 hp)	4
Ford	Mustang V8 ('69-'70 <291 hp)	4
Ford	Mustang V8 ('71-'73 <286 hp)	4
Ford	Mustang V8 ('79-'86 <226 hp)	4
Ford	Mustang V8 LX ('87-'93 <226 hp)	4
Ford	Mustang V8 GT ('87-'93 <226 hp)	4
Ford	Mustang V8 ('94-'98 <226 hp)	4
Ford	Mustang V8 ('99-'04)	3
Ford	Pinto 1.6L	4
Ford	Pinto 2.0L ('71-'74)	4
Ford	Pinto 2.3L	4
Ford	Pinto 2.8L	4
Ford	Probe GT	4
Ford	Probe Turbo	4
Ford	Sierra Cosworth 2.0L T (204 hp)	3
Ford	Sierra Cosworth AWD (220 hp)	3
Ford	Shelby GT500 5.4L S/C ('07-'09)	NA
Ford	Shelby GT500 5.4L S/C ('10-'11)	NA
Ford	Taurus GL	4
Ford	Taurus SHO	4
Ford	Thunderbird Super Coupe/Turbo	4
Ford	Thunderbird V6 (pre-'02)	4
Ford	Thunderbird V8 ('02)	4
Ford	Thunderbird V8 ('03+)	4
Ford	Thunderbird V8 ('90-'97)	4
Geo	Metro 1.0L	4
Geo	Metro 1.3L	4
Geo	Prizm	4
Geo	Storm	4
Geo	Storm GSI	4
Honda	Accord 2.0L (120hp)	4
Honda	Accord 2.2L ('90-'97)(130hp)	4
Honda	Accord 2.3L	4
Honda	Accord 2.4L ('03-'07)	4
Honda	Accord 2.7 V6 ('95-'97)	4
Honda	Accord 3.0 V6 ('03-'07)	4
Honda	Accord 3.0 V6 ('98-'02)	4
Honda	Civic 1.6L SOHC ('88-'91)	4
Honda	Civic Base ('88-'91)	4
Honda	Civic Coupe 1.8L ('06-'08)	4
Honda	Civic CX ('92-'95)	4
Honda	Civic del Sol S (<107hp)	4
Honda	Civic del Sol Si (<128hp)	4
Honda	Civic del Sol VTEC (DOHC 1.6L)	4
Honda	Civic DX 1.5L 16v ('88-'91)	4
Honda	Civic Non-VTEC (92hp)	4
Honda	Civic Si 1.6L ('92-'95)	4
Honda	Civic Si 1.6L ('99-'00)	4
Honda	Civic Si 2.0L ('01-'05)	4
Honda	Civic Si 2.0L ('06-'08)	4
Honda	Civic Type R ('07) (JDM)(225 hp)	2
Honda	Civic VX	4
Honda	CRX DX 1.5L 16v ('88-'91)	4
Honda	CRX DX 12v ('85-'87)	4
Honda	CRX HF	4
Honda	CRX Si 1.5L ('85-'87)	4
Honda	CRX Si ('88-'91)	4
Honda	CRX 1.6L DOHC VTEC	4
Honda	CR-Z (1.5L Hybrid)('11)	4
Honda	Fit ('07-'08)	4
Honda	Prelude S ('92-'96)	4
Honda	Prelude Si ('92-'96)	4
Honda	Prelude Si (pre-'92)	4
Honda	Prelude VTEC ('93-'01)	4
Honda	S2000 (2.0L)('00-'03)	2
Honda	S2000 (2.2L)('04-'08)	2
Honda	S2000 CR (2.2L)('08)	1
Hyundai	Accent 1.5L (105hp)	4
Hyundai	Accent 1.6L ('01-'08)	4
Hyundai	Elantra 1.6L	4
Hyundai	Elantra 1.8L	4
Hyundai	Elantra 2.0L ('00-'08)	4
Hyundai	Genesis 3.8L ('09-'10)	4
Hyundai	Genesis 4.6L ('09-'10)	2
Hyundai	Genesis Coupe 2.0L Turbo ('10)	3
Hyundai	Genesis Coupe 2.0L T Track ('10)	2
Hyundai	Genesis Cp 3.8 V6 Track ('10-'12)	1
Hyundai	Tiburon 2.0L ('03-'07)	4
Hyundai	Tiburon 2.0L ('97-'01)	4
Hyundai	Tiburon V6 2.7L ('03-'07)	4
Hyundai	Tiburon V6 GT LTD 2.7L ('06-'08)	4
Infiniti	G20 ('93-'02)	4
Infiniti	G20 ('91-'92)	4
Infiniti	G35 (incl. 6MT) (pre-'05)	3
Infiniti	G35 (incl. 6MT)('05-'06)	3
Infiniti	G35 Coupe 6MT ('07)	3
Infiniti	G35 (306 hp)(incl. Sport)('07-'08)	3
Infiniti	G35x (AWD)('07-'08)	2
Infiniti	G37 (7 sp auto)('09-'11)	1
Infiniti	I30 ('00-'01)	4
Infiniti	I30 ('96-'99)	4
Infiniti	I35	4
Infiniti	Q45 ('02-'07)	4
Infiniti	Q45 (pre-'02)	4
Jaguar	S-Type 3.0L (235 hp)	4

Make	**Model**	**Class**
Jaguar	S-Type 4.0L, 4.2L	3
Jaguar	S-Type R 4.2L S/C ('03-'04)	2
Jaguar	S-Type R 4.2L S/C ('05-'07)	2
Jaguar	XJ Vanden Plas (<301 hp)	4
Jaguar	XJ8 3.5L	4
Mazda	Mazda6 2.3L ('07-'08)	4
Mazda	Mazda6 3.0L (V6) ('03-'05)	4
Mazda	Mazda6 3.0L (V6) ('06-'08)	4
Mazda	Mazdaspeed Protegé (Turbo)	4
Mazda	Mazdaspeed3 (turbo)('07-'09)	3

Jaguar	XJ8 4.2L	3	Mazda	Mazdaspeed3 (turbo)('10)	3
Jaguar	XJ8 S/C ('00-'07)	2	Mazda	Mazdaspeed6 (AWD)('06-'07)	3
Jaguar	XJR ('98-'07)	2	Mazda	Miata 1.6L	4
Jaguar	XJS ('88-'91)	4	Mazda	Miata 1.8L ('94-'97)	4
Jaguar	XKR-SC ('00-'06)	2	Mazda	Miata 1.8L ('99-'05)	4
Jaguar	XKR-SC ('07)	1	Mazda	Miata MX-5 ('06-'11)	4
Jaguar	XKE	3	Mazda	Miata MX-5 turbo ('04-'05)	4
Jaguar	X-Type ('02-'07) AWD	4	Mazda	MX-3	4
Jen.-Healey	2.0L ('73-'76)	4	Mazda	MX-3 GS	4
Kia	Rio	4	Mazda	MX-6 (2.2L)(110hp)	4
Kia	Sephia	4	Mazda	MX-6 GT (turbo)	4
Kia	Spectra	4	Mazda	MX-6 V6 ('92-'97)	4
Lamborghini	Diablo VT	NA	Mazda	Protegé 1.6L	4
Lexus	GS300 ('06)	4	Mazda	Protegé 1.8L	4
Lexus	GS300 ('93-'05)	4	Mazda	Protegé 2.0L	4
Lexus	GS350 ('07-'08)	3	Mazda	Protegé 5	4
Lexus	GS400	3	Mazda	Protegé MP3	4
Lexus	GS430 ('01-'07)	3	Mazda	RX-3 ('72-'78) (12A)	4
Lexus	GS460 ('08)	3	Mazda	RX-7 12A	4
Lexus	IS250 ('06-'08)(6sp man.)	4	Mazda	RX-7 13B	4
Lexus	IS250 (AWD)('06-'08)	4	Mazda	RX-7 13B GSL-SE (1st Gen)	4
Lexus	IS F ('08-'09)	1	Mazda	RX-7 TT	1
Lexus	IS300	4	Mazda	RX-7 Turbo II	3
Lexus	LS400	4	Mazda	RX-8 ('04-'08)	3
Lexus	LS430	4	Mazda	RX-8 ('09-'11)	3
Lexus	LS460 ('07-'08)	3	Mazda	RX-8 R3 ('09-'11)	2
Lexus	SC300	4	Mazda	RX-8 (197 hp)(Auto)('04-'05)	4
Lexus	SC400	4	Mazda	RX-8 (212 hp)(Auto)('06-'07)	4
Lexus	SC430 ('02-'08)	4	Mercedes	190E 2.3 (16v)	4
Lincoln	LS (V8) ('03-'06)	4	Mercedes	190E 2.6L ('86-'93)	4
Lotus	Elan M100 ('91-'92)(turbo)	3	Mercedes	C230 ('02-'05)	4
Lotus	Elise ('05-'07)	1	Mercedes	C230 ('06-'07)	4
Lotus	Esprit (V8) TT	NA	Mercedes	C280 ('94-'00)	4
Lotus	Esprit 4 Turbo	1	Mercedes	C280 ('06-'07)	4
Lotus	Exige ('06)	1	Mercedes	C300 ('08)	4
Lotus	Exige S ('07)	NA	Mercedes	C32 AMG ('02-'04)	2
Lotus	Exige 240R, S240, S260	NA	Mercedes	C320 ('01-'05)	4
Mazda	323 (pre'95--82hp)	4	Mercedes	C43 AMG ('98-'00)	2
Mazda	323 GTX (1.6L T)	4	Mercedes	C55 AMG ('05-'06)	1
Mazda	626 2.0L	4	Mercedes	CL55 AMG (5.4L)('01-'02)	2
Mazda	626 2.5L V6	4	Mercedes	CL65 AMG ('06)	NA
Mazda	Mazda2 ('11)	4	Mercedes	CLK55 AMG ('04-'06)	2
Mazda	Mazda3 (2.0L)('04-'06)	4	Mercedes	CLK430 ('99-'01)	3
Mazda	Mazda3 (2.0L)('07-'10)	4	Mercedes	CLK430 ('02-'03)	3
Mazda	Mazda3 (2.3L)('04-'06)	4	Mercedes	CLK500 ('03-'06)	3
Mazda	Mazda3 (2.3L)('07-'09)	4	Mercedes	CLK550 ('07)	2
Mazda	Mazda3 (2.5L)('10)	4	Mercedes	CLK63 AMG ('07)	NA
Mazda	Mazda6 2.3L ('03-'06)	4	Mercedes	E55 AMG ('03-'06)	1

Make	**Model**	**Class**	**Make**	**Model**	**Class**
Mercedes	E55 AMG ('99-'02)	2	Mitsubishi	Starion ESI-R (turbo)	4
Mercedes	E63 AMG ('07)	NA	Nissan	200SX 1.6L	4
Mercedes	SL55 AMG ('03-'06)	1	Nissan	200SX 2.0L ('80-'81)	4
Mercedes	SL55 AMG ('07)	1	Nissan	200SX 2.0L Turbo	4
Mercedes	SL65 AMG ('07)	NA	Nissan	200SX SE-R (2.0L)	4
Mercedes	SLK 320 ('01-'04)	4	Nissan	240SX	4
Mercedes	SLK32 AMG ('02-'04)	1	Nissan	240SX (S14 220hp swap)	3

Mercedes	SLK 350 ('05-'08)	2	Nissan	240SX HICAS	4
Mercedes	SLK55 AMG ('05-'07)	1	Nissan	240SX SOHC ('89-'90) (140hp)	4
Mercury	Capri 1.6L (75hp)	4	Nissan	240Z	4
Mercury	Capri 2.0L ('71) (100hp)	4	Nissan	260Z	4
Mercury	Capri 2.0L ('72-'74)	4	Nissan	280Z	4
Mercury	Capri 2.3L ('76-'77)	4	Nissan	280ZX	4
Mercury	Capri 2.6L, 2.8L ('72-'74)	4	Nissan	280ZX Turbo	4
Mercury	Capri 2.8L ('76-'77)	4	Nissan	300ZX all (Z31--'84-'88) NA	4
Mercury	Cougar 2.5L V6	4	Nissan	300ZX Turbo (Z31--'84-'89)	4
Mercury	Marauder	4	Nissan	300ZX NA (Z32) 2+2	4
Merkur	XR4Ti	4	Nissan	300ZX NA (Z32--'89-'96)	4
MG	Midget 1.1l, 1.3l, 1.5l	4	Nissan	300ZX TT	2
Mitsubishi	3000 VR-4 ('91-'93)(AWD)	3	Nissan	350Z (287hp)('03-'05)(enth. ok)	2
Mitsubishi	3000 VR-4 ('94-'99)(AWD)	2	Nissan	350Z (300hp)('06)(enth. ok)	2
Mitsubishi	3000GT (NA-DOHC)	4	Nissan	350Z (306hp)('07-'08)(enth. ok)	2
Mitsubishi	3000GT (NA-SOHC)	4	Nissan	350Z Nismo ('07-'08)	1
Mitsubishi	Eclipse 2.4L (pre-'06)	4	Nissan	350Z Roadster ('06)	3
Mitsubishi	Eclipse 2.4L ('06-'08)	4	Nissan	350Z Track ('05-'06),35ann, GT	2
Mitsubishi	Eclipse GT 3.8L ('06-'08)	4	Nissan	350Z Track Model ('03-'04)	2
Mitsubishi	Eclipse GT 3.0L ('00-'05)	4	Nissan	370Z ('09)(6 sp. manual)	1
Mitsubishi	Eclipse Turbo ('90-'94)	4	Nissan	370Z Sport Model ('09)	1
Mitsubishi	Eclipse Turbo ('95-'98)	4	Nissan	370Z Nismo ('09)	1
Mitsubishi	Eclipse Turbo ('99)	4	Nissan	Altima 2.4L	4
Mitsubishi	Eclipse Turbo AWD ('92-'94)	4	Nissan	Altima 2.5L ('02-'09)	4
Mitsubishi	Eclipse Turbo AWD ('95-'98)	4	Nissan	Altima 3.5L ('02-'06)	4
Mitsubishi	Eclipse Turbo AWD ('99)	4	Nissan	Altima 3.5L ('07-'08)	3
Mitsubishi	Galant 2.4L ('94-'03)	4	Nissan	Altima 3.5L SE-R ('05-'06)	3
Mitsubishi	Galant 2.4L ('04-'07)	4	Nissan	GT-R ('09+)	NA
Mitsubishi	Galant 3.0L V6 (195hp)	4	Nissan	Maxima 3.5L ('02-'03)	4
Mitsubishi	Galant 3.8L (230 hp)('02-'07)	4	Nissan	Maxima 3.5L ('04-'06)	4
Mitsubishi	Galant 3.8L Ralliart ('07)	4	Nissan	Maxima 3.5L ('07-'08)	4
Mitsubishi	Galant VR4 (AWD) ('91-'92)	4	Nissan	NX2000	4
Mitsubishi	Lancer 2.0L ('02-'07)	4	Nissan	Pickup ('90-'97)(2WD)	4
Mitsubishi	Lancer 2.0L DE, SE ('08)	4	Nissan	Pulsar NX 1.8L	4
Mitsubishi	Lancer 2.4L ('04-'07)	4	Nissan	Sentra 1.6L ('87-'88)(8v)(69hp)	4
Mitsubishi	Lancer Evo VIII ('03-'05)(AWD)	1	Nissan	Sentra 1.6L (16v)	4
Mitsubishi	Lancer Evo VIII MR ('05)(AWD)	1	Nissan	Sentra 1.8L ('00-'06)	4
Mitsubishi	Lancer Evo IX ('06)(AWD)	1	Nissan	Sentra 2.0L ('07-'08)	4
Mitsubishi	Lancer Evo MR ('06)(AWD)	1	Nissan	Sentra SE ('98-'01)	4
Mitsubishi	Lancer Evo RS ('06)(AWD)	1	Nissan	Sentra SE-R 2.0L ('91-'94)	4
Mitsubishi	Lancer Evo X GSR ('08)(AWD)	1	Nissan	Sentra SE-R 2.5L ('02-'06)	4
Mitsubishi	Lancer Evo X MR ('08)(AWD)	1	Nissan	Sentra SE-R 2.5L ('07-'08)	4
Mitsubishi	Lancer Ralliart ('09)	2	Nissan	Sentra Spec V ('02-'06)	4
Mitsubishi	Mirage	4	Nissan	Sentra Spec V ('07-'08)	4
Mitsubishi	Mirage 1.8L	4	Noble	M12 GTO-3R (352 hp 3.0L V6)	NA
Mitsubishi	Starion (turbo)	4	Noble	M400 (425 hp 3.0L V6)	NA

Make	**Model**	**Class**	**Make**	**Model**	**Class**
Oldsmobile	Cutlass Calais 2.3L Int. (150hp)	4	Porsche	924S ('87)	4
Oldsmobile	Cutlass Calais 2.3L Int. (180hp)	4	Porsche	924S ('88)	4
Oldsmobile	Cutlass Calais 2.3L Quad442	4	Porsche	924 Turbo	4
Oldsmobile	Cutlass Calais Quad442 W41	4	Porsche	928 ('78-'82)(4.5L)	3
Opel	GT 1100	4	Porsche	944 ('83-'87)	4
Opel	GT1900	4	Porsche	944 2.5L ('88)	4
Opel	Manta	4	Porsche	944 2.7L ('89)(162 hp)	4
Peugeot	505 Turbo 2.2L ('86-'88)(150hp)	4	Porsche	944 S	4
Peugeot	505 Turbo 2.2L ('88-'89)(180hp)	4	Porsche	944 S2	3

Plymouth	Laser Turbo ('90-'94)	4	Porsche	944 Turbo ('86-'88)	3
Plymouth	Laser Turbo AWD ('92-'94)	4	Porsche	944 Turbo S ('88-'89)	2
Plymouth	Prowler	3	Porsche	959	NA
Pontiac	Fiero (4-cyl)	4	Porsche	964 Carrera 2	2
Pontiac	Fiero (V6)	4	Porsche	964 Carrera 4 (AWD)	2
Pontiac	Firebird 3.4L (V6)	4	Porsche	964 RS	1
Pontiac	Firebird 3.8L	4	Porsche	964 RS America	2
Pontiac	Firebird Firehawk	2	Porsche	965 3.3L (Turbo II--'90-'92)	1
Pontiac	Firebird WS6	2	Porsche	965 3.6L (Turbo II--'93-'94)	1
Pontiac	Formula ('98-'02)	3	Porsche	968	3
Pontiac	Formula (pre-'98)	3	Porsche	968 Turbo S	1
Pontiac	Formula '87 (5.0L, 215hp)	4	Porsche	993 C2 ('94-'95)	2
Pontiac	Grand AM 2.3L (170,180hp)	4	Porsche	993 C2 ('96-'99)	1
Pontiac	Grand Am 3.4L (V6)	4	Porsche	993 C2S	1
Pontiac	Grand Prix GT 3.8L ('98-'04)	4	Porsche	993 C4 (AWD)	1
Pontiac	Grand Prix GT 3.8L ('05-'06)	4	Porsche	993 C4S (AWD)	1
Pontiac	Grand Prix GTP ('99-'03)	4	Porsche	993 Cup	NA
Pontiac	Grand Prix GTP ('04-'06)	4	Porsche	993 RS 3.8L	1
Pontiac	Grand Prix GXP ('05-'08)	3	Porsche	993 Turbo (AWD)	NA
Pontiac	Grand Prix SE 3.1L	4	Porsche	993 Turbo S (AWD)	NA
Pontiac	GTO ('04)	3	Porsche	996 C2 (3.4L) ('99-'01)	1
Pontiac	GTO ('05-'06)	2	Porsche	996 C2 (3.6L)('02-'04)	1
Pontiac	Solstice ('06-'08)	4	Porsche	996 C4 (3.4L)	1
Pontiac	Solstice GXP (turbo)('07-'08)	2	Porsche	996 C4 (3.6L)	1
Pontiac	Trans Am ('98-'02)	3	Porsche	996 C4S (3.6L)	1
Pontiac	Trans Am (pre-'98)	3	Porsche	996 GT2	NA
Pontiac	Trans Am Turbo V6	3	Porsche	996 GT3	NA
Pontiac	Vibe 1.8L ('03-'07)	4	Porsche	996 Cup	NA
Pontiac	Vibe GT ('04-'06)	4	Porsche	996 Turbo	NA
Pontiac	Vibe GT ('03)	4	Porsche	996 Turbo S	NA
Porsche	911 ('63-'69)	4	Porsche	997 C4 ('06-'07)	NA
Porsche	911 ('70-'73)	4	Porsche	997 C4S ('06'-07)	NA
Porsche	911 ('73-'77)	4	Porsche	997 Carrera ('05-'07)	1
Porsche	911 ('78-'83)	3	Porsche	997 Club Coupe	NA
Porsche	911 ('84-'89)	3	Porsche	997 CS ('05-'07)	NA
Porsche	911 Carrera ('73-'77)	3	Porsche	997 GT3 ('07)	NA
Porsche	911 Turbo 3.0L ('74-'77)	1	Porsche	997 GT3 Cup	NA
Porsche	911 Turbo 3.3L ('77-'89)	1	Porsche	997 Turbo AWD ('07)	NA
Porsche	911S ('67-'69)	3	Porsche	Boxster ('97-'99)	4
Porsche	911S ('70-'73)	3	Porsche	Boxster ('00-'02)	3
Porsche	912	4	Porsche	Boxster ('02-'04)	3
Porsche	914-4	4	Porsche	Boxster ('05-'06)	3
Porsche	914-6	4	Porsche	Boxster ('07-'08)	2
Porsche	924	4	Porsche	Boxster ('09-'10)	2

Make	**Model**	**Class**	**Make**	**Model**	**Class**
Porsche	Boxster S ('05-'06)	2	Subaru	Outback 3.0 ('05-'07)(AWD)	4
Porsche	Boxster S ('00-'02)	2	Subaru	Outback XT ('05-'06)(AWD)	4
Porsche	Boxster S ('03-'04)	2	Subaru	Outback XT ('07)(AWD)	4
Porsche	Boxster S ('07-'08)	1	Subaru	SVX (AWD)	4
Porsche	Boxster S ('09-10)	1	Subaru	WRX 2.0L ('02-'05) (AWD)	3
Porsche	Boxster Spyder ('11)	1	Subaru	WRX 2.5L ('06-'08)(AWD)	3
Porsche	Carrera GT	NA	Subaru	WRX 2.5L ('09-'12)(AWD)	2
Porsche	Cayenne S ('03-'06)(AWD)	4	Subaru	WRX STi ('04-'07)(AWD)	1
Porsche	Cayenne Turbo ('08)(AWD)	2	Subaru	WRX STI ('08-'12)(AWD)	1
Porsche	Cayman 2.7L ('07-'08)	2	Subaru	XT	4
Porsche	Cayman S 3.4L ('06-'08)	1	Subaru	XT6 (AWD)	4

Renault	Alliance 1.4L (60hp)	4
Renault	Alliance 1.7L (85hp)	4
Renault	Alliance 2.0L GTA (95hp)	4
Rossion	Q1	NA
Saab	900 Turbo SPG ('85-'89)	4
Saab	900 Turbo SPG ('90-'91)	4
Saab	9000 Aero 2.3L Turbo ('93-'97)	4
Saab	9-2X Aero ('05)(AWD)	3
Saab	9-2X Aero ('06)(AWD)	3
Saab	9-2X Linear ('05-'06)(AWD)	4
Saab	9-3 Aero 2.0T & 2.0T ('04-'07)	4
Saab	9-3 Aero 2.8L ('06-'07)	3
Saab	9-3 Viggen ('99-'02)	4
Saab	9-5 2.3T	4
Saab	9-5 Aero 2.3T & 2.3T ('02-'06)	4
Saab	99 EMS ('72-'76)(2.0L)	4
Saturn	Ion ('03-'04)	4
Saturn	Ion ('05-'07)	4
Saturn	Ion Redline ('04-'07)	4
Saturn	Sky ('07-'08)	4
Saturn	Sky Redline ('07-'08)	2
Saturn	S-Series (DOHC) ('91-'02)	4
Saturn	S-Series (SOHC) ('91-'02)	4
Scion	tC ('05-'10)	4
Scion	tC ('11)	4
Scion	xA ('04-'06)	4
Scion	xB ('04-'06)	4
Subaru	Forester XT ('04-'05) (AWD)	4
Subaru	Forester XT ('06-'07) (AWD)	4
Subaru	Impreza 1.8L (AWD)	4
Subaru	Impreza 1.8L (FWD)	4
Subaru	Impreza 2.2L (AWD)	4
Subaru	Impreza 2.5L ('98-'01)(AWD)	4
Subaru	Impreza 2.5L ('02-'05)(AWD)	4
Subaru	Impreza 2.5L ('06-'08)(AWD)	4
Subaru	Legacy 2.2L ('90-'94)(AWD)	4
Subaru	Legacy 2.2L ('95-'99)(AWD)	4
Subaru	Legacy 2.2L T AWD ('91-'94)	4
Subaru	Legacy 2.5L ('00-'08)(AWD)	4
Subaru	Legacy GT ('05-'08)(AWD)(Turb)	3
Subaru	Legacy 3.0 AWD ('08)	4
Subaru	Outback 3.0 ('01-'04)(AWD)	4
Sunbeam	Tiger	4
Suzuki	Swift ('94-'01)	4
Suzuki	Swift 1.3L GT ('89-'94)	4
Suzuki	SX4 Sport ('08-'09)	4
Suzuki	SX4 Sport ('10)	4
Toyota	Camry 2.4L ('02-'06)	4
Toyota	Camry 2.4L ('07-'08)	4
Toyota	Camry 3.0L (V6)('97-'01)	4
Toyota	Camry 3.0L (V6)('03-'05)	4
Toyota	Camry 3.3L (V6)('04-'05)	4
Toyota	Camry 3.3L (V6)('06)	4
Toyota	Camry 3.5L (V6)('07-'08)	4
Toyota	Celica AllTrac ('88-'89)	4
Toyota	Celica AllTrac ('90-'93)	4
Toyota	Celica GT ('00-'05)	4
Toyota	Celica GT ('77-'82)	4
Toyota	Celica GT ('83-'86)	4
Toyota	Celica GT ('87-'89)	4
Toyota	Celica GT ('90-'99)	4
Toyota	Celica GT-S ('00-'05)	4
Toyota	Celica GT-S ('83-'85)	4
Toyota	Celica GT-S ('86-'93)	4
Toyota	Celica ST ('90-'93)	4
Toyota	Celica Supra (1st gen)	4
Toyota	Corolla 1.8L ('03-'07)	4
Toyota	Corolla FX-16 GT-S	4
Toyota	Corolla GT-S 1.6L 16v ('84-'87)	4
Toyota	Corolla GT-S 1.6L 16v ('88-'89)	4
Toyota	Corolla SR5 ('79-'83)(3TC)	4
Toyota	Corolla XRS	4
Toyota	Echo	4
Toyota	Matrix ('03-'07)	4
Toyota	Matrix XRS (180 hp)('03-'04)	4
Toyota	Matrix XRS ('05-'06)	4
Toyota	MR Spyder	4
Toyota	MR2 (1st Gen NA)	4
Toyota	MR2 2.2L DOHC	4
Toyota	MR2 SC	4
Toyota	MR2 Turbo	3
Toyota	Paseo	4
Toyota	Prius	4
Toyota	Solara 3.3L ('04-'06)	4

Make	**Model**	**Class**
Toyota	Solara 3.3L ('07-'08)	4
Toyota	Supra NA ('88-'92)	4
Toyota	Supra NA ('94-'98)	4
Toyota	Supra T	4
Toyota	Supra TT	1
Toyota	Tacoma X-Runner ('05-'10)	4
Toyota	Tercel ('88-'90) (78hp)	4
Toyota	Yaris ('07)	4
Triumph	GT6 MK I	4
Triumph	GT6 MK III	4
Triumph	Spitfire MK 2 (75hp, 1147cc)	4
Triumph	TR4 ('61-'64)	4
Triumph	TR6 ('69-'76)(2.5L S6 US Carb)	4
VW	Golf 1.9L TDI ('99-'03)	4
VW	Golf 1.9L TDI ('04-'06)	4
VW	Golf 2.0L TDI ('10)	4
VW	Golf 2.0L, 1.4L & 1.6L DOHC	4
VW	Golf 2.0L ('99-'06)	4
VW	Golf 2.5L V5	4
VW	Golf 2.8L V6	4
VW	Golf 2.8L VR6	4
VW	Golf R32 (AWD)('04)	3
VW	Golf R32 (AWD)('08)	4
VW	GTI 1.8L 8v ('85-'92)	4
VW	GTI 1.8L DOHC	4
VW	GTI 1.8L turbo (150 hp)	4

Triumph	TR6 ('69-'76)(2.5L S6 Fuel Inj)	3	VW	GTI 1.8L turbo (180hp)	4
Volvo	242 (2.3L) ('83-'85)	4	VW	GTI 2.0L 8v ('95-'98)	4
Volvo	242 GLT ('81-'85)(turbo)	4	VW	GTI 2.0L 8v ('99-'00)	4
Volvo	850 2.4L n.a. ('93-'97)	4	VW	GTI 2.0L DOHC (134 hp)	4
Volvo	850 T-5R ('95), R ('96-'97)	4	VW	GTI 2.0L Turbo ('06-'09)(200hp)	4
Volvo	C30 T5 2.5L turbo ('08)	3	VW	GTI 2.0L Turbo ('10-'11)(200hp)	4
Volvo	C70 T5 2.3 T Coupe ('01-'02)	4	VW	GTI 2.8L V6 (174hp)	4
Volvo	C70 T5 2.3 T Conv. ('99-'04)	4	VW	GTI 2.8L V6 (200hp)	4
Volvo	C70 T5 ('06-'07)	4	VW	GTI 337 (turbo)	4
Volvo	P1800 ('61-'62)	4	VW	Jetta 1.6L	4
Volvo	S40 1.9 L ('00-'04)	4	VW	Jetta 1.8L DOHC	4
Volvo	S40 2.4L ('04-'06)	4	VW	Jetta 1.8L SOHC	4
Volvo	S40 2.4L ('07)	4	VW	Jetta 1.8L turbo GLI	4
Volvo	S40 T5 ('05)	4	VW	Jetta 2.0L GLi DOHC	4
Volvo	S40 T5 ('06-'07)	4	VW	Jetta 2.0L SOHC	4
Volvo	S40 T5 ('05-'07)(AWD)	4	VW	Jetta 2.0L turbo ('06-'08)	4
Volvo	S60 2.4L	4	VW	Jetta 2.5L I5 ('05-'07)	4
Volvo	S60 2.5L Turbo ('04-'06)(AWD)	4	VW	Jetta 2.5L I5 ('08)	4
Volvo	S60 2.5L Turbo ('07)(AWD)	4	VW	Jetta 2.8L VR6 12v ('94-'98)	4
Volvo	S60 2.5L Turbo ('04-'06)(FWD)	4	VW	Jetta 2.8L VR6 12v ('99-'02)	4
Volvo	S60 2.5L Turbo ('07)(FWD)	4	VW	Jetta 2.8L VR6 24v	4
Volvo	S60 R ('04-'05)(AWD)	3	VW	Passat 2.0L turbo ('06-'08)	4
Volvo	S60 R ('06-'07)(AWD)	3	VW	Passat 2.8L	4
Volvo	S60 2.4L T5 ('05-'07)	3	VW	Passat 3.6L ('06-'08)	4
Volvo	S60 2.3L T5 ('01-'04)	4	VW	Passat 3.6L ('06-'08)(AWD)	4
VW	Beetle 1.8L T (150hp)('99-'05)	4	VW	Passat W8 (AWD)	4
VW	Beetle 1.9L TDI ('98-'03)	4	VW	Rabbit 1.6L	4
VW	Beetle 1.9L TDI ('04-'06)	4	VW	Rabbit 1.6L Diesel (<'92)	4
VW	Beetle 2.0L ('98-'05)	4	VW	Rabbit 1.6L Turbo-Diesel (<'93)	4
VW	Beetle 2.5L ('06-'08)	4	VW	Rabbit 1.7L (74hp)	4
VW	Beetle Turbo S ('02-'04)	4	VW	Rabbit 2.5L ('06-'07)	4
VW	Corrado 1.8L DOHC, 2.0L DOHC	4	VW	Rabbit 2.5L ('08)	4
VW	Corrado 2.0L SOHC	4	VW	Rabbit GTI 1.8L (90hp)	4
VW	Corrado G60 1.8L S/C	4	VW	Scirocco 1.6L (75-78hp)	4
VW	Corrado VR6	4	VW	Scirocco 1.7L (74hp)	4
VW	Golf 1.6L, 1.8L	4	VW	Scirocco 1.8L DOHC	4
VW	Golf 1.8L DOHC, 2.0L DOHC	4	VW	Scirocco 1.8L SOHC	4