

**Rocky Mountain Division SCCA
Spec E30 Rules
2011**

A. GENERAL

1. Spec E30 is a regional-only class for BMW E30 automobiles competing in SCCA-sanctioned regional club racing events in the Rocky Mountain Division.
2. The class administrator is:
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3. All Spec E30 cars shall comply with these rules and Section 9 of the GCR. Per GCR 9.1., these rules constitute Specific Provisions for the Spec E30 class, and where the specific provisions of these rules conflict with the general provisions of GCR 9., these rules shall take precedence.
4. These rules are modeled on the Improved Touring Category specifications of GCR 9.1.3. Spec E30 shall be considered an Improved Touring Category class for the purpose of determining which general provisions of GCR 9. apply to Spec E30 cars. Spec E30 cars are Production-Based cars and thereby subject to the roll cage requirements of GCR 9.4. as they apply to Improved Touring Category class cars except where such provisions conflict with these rules.
5. The identification marking for cars competing in the Spec E30 class, per GCR 9.3.28., shall be "SE30".
6. All references to the GCR contained in these rules are to the 2008 Edition of the GCR, which becomes effective January 1, 2008.

B. ELIGIBLE CARS AND SPECIFICATIONS

The following cars may be raced in Spec E30:

Model	Production Years	Minimum Weight	Final Drive Ratio
E30 318i 4-door	1990-1991	2600 lbs.	4.10
E30 318i Convertible	1990-1991	2600 lbs.	4.10
E30 318is	1990-1991	2600 lbs.	4.10
E30 325i	1987-1991	2750 lbs.	3.73
E30 325i Convertible	1987-1992	2750 lbs.	3.73
E30 325is	1987-1991	2750 lbs.	3.73

C. VEHICLE PREPARATION IN GENERAL

1. Parts or assemblies which the manufacturer lists in factory service manuals or parts guides for a particular model which supersede or replace original parts or assemblies are permitted. Use of such parts or assemblies does not constitute a modification. Documentation of the superseding parts or assemblies must be supplied to the race officials in case of inspection or protest.
2. Stock replacement parts for any part may be obtained from sources other than the manufacturer provided they are the exact equivalent of the original parts. Use of such parts does not constitute a modification. The intent of this rule is to allow the competitor to obtain replacement parts from standard industry outlets, e.g., auto-parts distributors, rather than from the manufacturer. It is not intended to allow parts that do not meet all dimensional and material specifications of new parts from the manufacturer.
3. Hardware fasteners (nuts, bolts, washers, clips, etc.) in any location on or in the vehicle may be replaced with similar items that perform the same fastening function so long as they do not perform any additional

function. The use of safety wire to insure the security of fasteners is permitted so long as the safety wiring does not perform any additional function. Use of hardware fasteners and safety wire in accordance with this section does not constitute a modification.

4. Fluids/Lubricants: Engine oil, engine coolant, power steering fluid, transmission fluid, differential fluid, brake fluid, greases and other lubricants are unrestricted. The use of additives in the fluids/lubricants listed in this section is permitted. Use of fluids, lubricants, and additives in accordance with this section does not constitute a modification

5. As used in these rules, the word "replace" when used by itself means replacement with any part that meets or exceeds OEM specifications for performance, durability, and/or safety. If the word "replace" is used associated with a description or specification, replacement shall be restricted to conform to the description or specification. Use of such parts constitutes a modification, and only such modifications as are authorized in section D. of these rules are permitted.

6. To establish the originality and configuration of the vehicle, each driver/entrant shall have and be in possession of a factory shop manual for the specific model and year of the vehicle. A car that has had an engine swap will be classed as a vehicle of model and year in which the engine was original, and requires a factory shop manual corresponding to such a vehicle. The factory shop manual shall be presented upon request at any technical inspection. If the factory shop manual is no longer available from the vehicle manufacturer, an aftermarket shop manual will be accepted with proof of non-availability from the vehicle manufacturer.

D. AUTHORIZED MODIFICATIONS

The following modifications are authorized on all Spec E30 cars except as specified herein. Modifications shall not be made unless authorized herein. No permitted component/modification shall additionally perform a prohibited function.

1. ENGINE

a. Engine Swaps:

1. Engine swaps between E30 cars that are classed in Spec E30 are permitted, however cars that do not have an original type engine (i.e. the engine was not available in the model and year of the car as determined by its VIN number) shall be classed as a car of model and year in which the engine was original, and shall conform to the minimum weight, transmission, final drive ratio, and ECU requirements for such a car as listed in section B. and elsewhere in these rules.

2. Swapping or mixing of engine components between different engine types (e.g. mating the head from an M40 engine with the block from an M10 engine) is not permitted.

b. Fuel System: Any fuel pump(s)/filter(s) may be used. Pump(s) may be relocated but shall not be located in the driver/passenger compartment. Fuel line(s) may be replaced, relocated, and given additional protection. If the fuel line(s) passes through the driver/ passenger compartment, it/they shall be metal or metal braided, and shall be securely fastened. Fuel lines shall not exceed three-eighths (3/8) inch inside diameter. An adjustable fuel pump pressure regulator may be installed.

c. Air Intake: Air filter elements may be replaced, and stock air intake and air box assemblies may be replaced with aftermarket filters that attach directly to the airflow sensor housing. Heat shielding is permitted around an aftermarket air intake/air filter assembly.

d. Fuel: Permitted fuel is gasoline, of any octane, leaded or unleaded. Performance enhancing fuel additives are prohibited.

e. Ignition/Electrical: Any spark plugs and ignition wires may be used. Batteries may be replaced provided they meet or exceed OEM amp-hour capacity specifications and are fitted in the standard location. The battery mount may be replaced, and additional battery hold-down devices may be used and are strongly recommended.

f. Cruise Control: The cruise control mechanism may be modified or removed.

g. Exhaust System: Any part of the exhaust system downstream of the exhaust manifold including the catalytic converter may be modified or replaced subject to the following provisions:

1. The stock exhaust manifold shall be used.
2. The catalytic converter may be replaced, modified, or removed.
3. The system shall exit from beneath the body in the same approximate location(s) as the original system.
4. A commercially-available muffler shall be installed in the original muffler location at the rear of the car.
5. Original exhaust system heat shields may be removed provided any plastic fuel tank is shielded.

h. Lubrication System: Oil pans, pan baffles, scrapers, windage trays, oil pickups, lines, and filters are unrestricted. Oil hoses may be replaced with metal braided hose (e.g. Aeroquip). A pressure accumulator/"Accusump" may be fitted. The location of the oil filter(s) and accumulator are unrestricted, but they shall be securely mounted within the bodywork. All oil lines that pass into or through the driver/passenger compartment shall be metal or metal braided hose. Dry sump systems are prohibited.

i. Oil Catch Tank: All engine oil breathers or vapor recirculation lines, if vented into the atmosphere, shall vent to an oil catch tank. Such catch tanks shall not be mounted in the driver/passenger compartment.

j. Pistons/Cylinder Boring: The maximum allowable overbore is limited to that of the largest available factory replacement piston but not to exceed .020 inch over standard bore size. Factory replacement pistons or their equivalent with the exception of diameter shall be used. Cast or forged equivalent pistons shall provide the same dome/dish/valve relief configuration, ring groove width and spacing, pin height relationship, and weigh no less than the factory standard bore pistons. Piston rings are unrestricted.

k. Engine Balancing: Balancing and "blueprinting" of the engine assembly are permitted. Lightening of parts beyond the minimum material removal necessary to balance is prohibited.

l. Valve Train: Valve guide material is unrestricted. Rocker arms may be replaced with alternative rocker arms having the same functional dimensions and geometry as stock. All valve sizes, seat dimensions and angles, etc., shall conform to factory specifications. All cam dimensions, lift, duration, timing, etc., shall conform to factory specifications.

m. Clutch/Flywheel: Any clutch disc and pressure plate of stock diameter may be used, provided that they shall be bolted directly to an unmodified stock flywheel. Balancing of the flywheel/clutch/pressure plate assembly is permitted. Lightening of the flywheel beyond the minimum material removal necessary to balance is prohibited, and the flywheel must remain within factory specifications after balancing. Flywheel part number 11 221 709032 may be installed on M42 engines.

n. Engine Bearings: Bearings may be replaced.

o. Gaskets: Cylinder head gasket(s) may be replaced with any gasket(s) having the same or greater compressed thickness as stock. Other engine gaskets are unrestricted.

p. Overhaul Procedures/Component Modification: No engine component may be modified in any manner not specifically permitted or authorized by these rules or by the Factory Service Manual or Factory Technical Bulletins. Overhaul procedures which in any way may increase performance beyond factory specifications and which are not specifically authorized by these rules are prohibited (e.g. porting, polishing, etc.). Compression ratio may be changed only as a result of and to the extent caused by resurfacing the cylinder head and block for trueness within the factory tolerances permitted for such resurfacing.

q. Coating/Plating: The application and/or use of any painting, coating, plating, or impregnating substance (i.e. anti-friction, thermal barrier, oil shedding coatings, chrome, anodizing, etc.) to any internal engine surface, including intake manifold internal surface, is prohibited.

r. Motor Mounts: Alternate, non-metal motor mounts, providing the same height as original, are permitted.

s. ECU: The engine management computer or ECU may not be altered, and shall be of a type and part number originally installed on the engine by the manufacturer. A factory ECU that, in its original configuration, does not limit the maximum speed of the vehicle may be used provided it was installed as original equipment by the manufacturer on some eligible E30 model and year of the engine regardless of the fact that it was not originally installed on the car or engine.

t. Trim/Insulation: Cosmetic trim pieces and sound-deadening, insulating, or protective material may be removed from the interior of the engine compartment.

2. ENGINE COOLING SYSTEM

a. Radiator/Catch Tank: Any radiator may be used, provided it is mounted in the original location, maintains the same plane as the original core and requires no body or structure modifications to install. A catch tank for radiator overflow is mandatory.

b. Oil Cooler: Oil cooler(s) may be added or replaced. Location within the bodywork is unrestricted, provided that it/they are not mounted within the driver/passenger compartment.

c. Cooling Fan: The mechanical cooling fan and associated assembly (fan, fan belt, fan clutch and fan shroud) may be removed or replaced. Electrically operated fans with manual or automatic actuation may be fitted.

d. Thermostat: Thermostats may be modified, removed, or replaced with blanking sleeves or restrictors.

e. Air Conditioning: Air conditioning systems, including the air conditioning compressor drive belt, may be removed in whole or in part.

f. Protective Screens: Screens of one-fourth (1/4) inch minimum mesh may be mounted in front of the radiator and/or oil cooler(s) and contained within the bodywork.

g. Hoses/Controls: Heater hoses may be plugged. Heater water control valve(s) may be added or substituted. Heater core and hoses shall not be removed.

3. DRIVETRAIN

a. Transmission: The transmission shall be original or a factory option for the model/year. No alterations or substitutions of gear ratios or any other transmission component are permitted. Cars that have had an engine swap must use a transmission that was original or a factory option for a car in which the engine was original.

b. Shift Mechanism: Modification to, or replacement of, the shifter mechanism is permitted.

c. Transmission Mounts: Alternate, non-metal transmission mounts providing the same height as original are permitted.

d. Driveshaft:

1. The vibration damper may be removed.

2. The driveshaft may be modified for, or be replaced with a stock driveshaft that has been modified for, the installation of replaceable u-joints. No other modification including lightening by removal of metal or use of alternate materials is permitted. U-joints are unrestricted, and may be of a greaseable design that uses a zerk fitting.

d. Final Drive Ratio: The final drive ratio is for each eligible car is specified in section B. of these rules. Cars that have had an engine swap must use the final drive ratio specified in section B. of these rules for a car in which the engine was original.

e. Limited Slip/Locking Differentials: A factory limited-slip differential, or the welding of a factory differential to create a locked differential is permitted.

f. Differential Cover: Finned, larger-capacity differential covers are permitted.

4. CHASSIS

a. Steering:

1. Power steering belts may be removed.

2. Power steering pump and associated plumbing may be removed.

3. Power steering hoses may be replaced with metal braided hose (e.g. Aeroquip).

b. Springs and Shock Absorbers:

1. Front MacPherson strut inserts shall be replaced with Bilstein Sport inserts part numbers P36-0335 or P30-0334. No modification of any kind is permitted. Updated (larger) front strut housings, BMW part number 31 31 1 127 315/6 are permitted.
2. Rear shock absorbers shall be replaced with Bilstein Sport shocks part number B36-2027. No modification of any kind is permitted.
3. Springs shall be replaced with H&R Race Springs part number 50404-88. Front spring part number 50404-88F and EBS-BMW-3/1 are equivalent and may be substituted. No modification to any spring is permitted. Spring pads may be removed.

c. Suspension Control:

1. A non-adjustable front anti-roll bar measuring 22mm and an adjustable rear anti-roll bar measuring 19mm shall be used. Brand of manufacture is unrestricted.
2. Anti-roll bar links provided for use with a bar by its manufacturer are permitted.

d. Suspension Mounting Points:

1. Any fixed or adjustable camber or camber/caster plate is allowed. Material may be added or removed from the top of the strut tower to facilitate installation of the plate.
2. Use of eccentric/offset bushings at the control arm pivot points or at the strut-to-bearing-carrier joint is permitted.
3. Maximum negative camber front and rear is 3.5 degrees. Any front or rear suspension toe setting not requiring machining or modification to factory parts is allowed.
4. Suspension bushing material is unrestricted.
5. Any bolt-in strut or shock tower brace is permitted.
6. Additional reinforcement of sway bar pick-up points and trailing arm pick-up points is permitted.
7. Additional reinforcement of front sub-frame, motor mount areas, control arm pick-ups, idler arm and steering box mounts is permitted.
8. Solid rear upper shock mounts are permitted.

5. BRAKES

a. Pads: Brake pads are unrestricted.

b. Rotors: Backing plates and dirt shields may be ventilated or removed. Air ducts may be fitted to the brakes. Brake rotors may be replaced provided that they match OEM specifications for the E30 application. Vented front rotors are permitted. Rotors may be cross-drilled, grooved, slotted, and/or cryogenically treated.

c. Calipers: Cars equipped with ATE calipers may replace the stock rubber guide pin bushings with brass guide pin bushings.

d. Brake Lines: Flexible brake hoses may be replaced with Teflon-lined metal braided hose. Factory steel brake lines may be replaced by generic, bendable steel brake lines. Lines/hoses may be relocated and may be given additional protection. Brake fittings, adaptors, and connectors are unrestricted. Brake system circuitry may not be revised, and no modification or replacement of the master cylinder, its location, or mounting is permitted.

e. Parking Brake: Parking brakes, mechanisms, and actuating components, including the parking brake console, may be removed.

6. WHEELS/TIRES

a. Wheels: Wheels of any brand of manufacture may be used. Wheels shall be made of metal, shall be 14 by 6 inches, 14 by 6.5 inches, or 15 by 7 inches, and shall weigh a minimum of thirteen (13) pounds.

b. Tires: Tires shall be Toyo Proxes RA-1 or Toyo R888 in sizes 205/55/14 or 205/50/15. Recapped, or regrooved tires are not allowed. The only modifications allowed to tires are having treads "shaved" or "trued."

c. Track/Spacers: Track may be changed provided that there is safe tire/fender/chassis clearance under all conditions of steer, bump, and rebound. Wheel spacers are permitted.

d. Fender Coverage: Tire tread (that portion of the tire that contacts the ground under static conditions) shall not protrude beyond the fender opening when viewed from the top perpendicular to the ground. To determine compliance, the vehicle should be rolled through a powdered substance, as raced with driver, in order to indicate the tire tread contact patch under static conditions.

e. Studs/Bolts: Any wheel stud, bolt, and or nut is permitted.

7. BODY/STRUCTURE

a. Fenders: Fenders and wheel openings shall remain unmodified. It is permitted to roll under or flatten any interior lip on the wheel opening for tire clearance. Non-metallic inner fender liners may be removed.

b. Front Spoiler: Front spoilers, air dams, and splitters are permitted, provided they do not protrude more than two (2) inches beyond the overall outline of the body when viewed from above perpendicular to the ground, or aft of the forward most part of the front fender opening. This body outline does not include bumpers or bumper mounts, but does include the integrated bumper assemblies of 1989 through 1991 model cars. 1989 through 1991 model cars with integrated bumper assemblies may use aftermarket one-piece front bumper/spoiler units provided the original crash bar remains in place.

c. Ducting: Ducting to the brakes is permitted, and two openings in the front valance to allow the passage of up to a three (3) inch diameter duct leading to each front brake are permitted for this purpose. Ducting to the oil cooler is permitted, and openings in the front valance to allow the passage of up to a three (3) inch diameter duct leading to the cooler is permitted for this purpose. Screening of one-fourth (1/4) inch minimum mesh may be added to cover all openings in the front of the vehicle, if contained entirely with the bodywork of the vehicle.

d. Rear Spoiler: The original 325is rear trunk lid spoiler (lip) or aftermarket product with the same form and fit is permitted.

e. Underbody: Modifications to the underside of the car for the purpose of improving aerodynamics are not permitted, but any undercoating or other similar protective materials may be removed from the underbody. Engine under-tray panels may be removed.

f. Windshield Clips: Windshield clips and rear window straps per GCR Section 9.3.52. are permitted and recommended.

g. Hood/Trunk Latching: Hood and trunk pins, clips, or positive action external latches are permitted. Stock hood and trunk latches may be disabled or removed if a positive action external fastening method is used.

h. Windshield Washer Reservoir: Windshield washer fluid reservoirs may be replaced, removed, or relocated.

i. Convertible Top: Convertible tops and attaching hardware shall be completely removed. Convertible models may compete with their respective OEM hardtop. All latches shall be replaced with positive fasteners.

j. Sunroof: Manual and electric sunroofs, original or aftermarket, where the panel is not normally removable shall be retained and run in the closed position. Components (motors, cables, rails) may be removed provided the panel is securely retained. Removable sunroofs may be retained if bolted or welded in, or removed completely. Glass sunroofs must be removed. All sunroofs may be replaced with panel or replacement skin of the same material as the original surrounding roof material.

k. Paint/Markings: Any paint scheme and markings meeting GCR specifications are permitted.

l. Structural Repair: All chassis/structural/electrical repair, if performed, shall be in concurrence with factory procedures, specifications, and dimensions. Unless specifically authorized by the manufacturer for repair or allowed by these rules, no reinforcement, i.e., seam welding, material addition, etc., is permitted.

m. Body Repair: Body repair shall be performed using every reasonable effort to maintain stock body contours, lips, etc. Any body repair modification having as its purpose increased clearance is prohibited.

n. Radio Antennas: Radio antennas may be removed. Antennas for two-way radio may be added.

o. Trim: Body side moldings, rocker panel moldings, wheel opening trim pieces, side reflectors, etc. may be removed. Resulting holes may be filled.

8. PASSENGER COMPARTMENT/TRUNK

a. Front Seats: The driver's seat shall be replaced with a one-piece bucket-type race seat. The passenger's seat may be replaced with any race seat or removed. Factory seat tracks/brackets may be modified, reinforced, and/or removed to facilitate replacement mountings provided they perform no other function.

b. Steering Wheel/Shift Knob: Any steering wheel except wood rimmed types may be used. Quick-release steering wheel mounting hubs are permitted. Any shift knob may be used.

c. Instrumentation/Dash: Water temperature, oil temperature, fuel pressure, oil pressure, exhaust temperature, engine RPM speed (tachometer), and mixture gauges may be added, replaced, or removed but may not perform any secondary function. They may be installed in the original instrument(s) location or any other location using a secure method of attachment. Data acquisition devices are permitted but may not perform a secondary function. On board timing receivers are permitted. Other than modifications made to mount instruments, provide for roll cage installation, and attach a driver's right-side safety net the remainder of the dash "board" or panel itself shall remain intact.

d. Mirrors: Interior mirror(s) may be replaced. The replacement mirror shall not extend beyond the confines of the interior of the vehicle. The driver's side outside mirror glass may be modified, but the mirror housing itself shall remain stock.

e. Rear Seats: The rear seat back and rear seat bottom cushion may be removed. In any automobile where removal of rear seats, upholstery, trim panels, etc., creates an opening between the driver/passenger compartment and an exposed gas tank, fuel cell, or part thereof, a metal bulkhead which completely fills such opening shall be installed (See GCR 9.3.26.1.)

f. Interior Removal/Doors: The interior, including carpeting, headliner (to include the leading plastic panel), dome light, console, OEM seat belts, glove box door, under-dash panels, grab handles, driver and passenger door window glass and mechanisms, driver-side and passenger-side rear door window glass and mechanisms (if applicable), heating and cooling system interior ducts, rear passenger compartment side trim panels and package shelf (third brake light shall remain in place), and sun visors may be removed. Any sound-deadening, insulating, or protecting materials may be removed from the interior of the passenger compartment. Door interior trim panels may be replaced with 0.060" aluminum or comparable material securely attached to the door. Any door adjacent to a seat equipped with seat belts or harness shall be capable of being opened from both inside and outside the car.

g. Trunk Interior: Any removable covers used to cover spare tires, tools, bins, etc., may be removed. Trim panels, carpets, mats, and their insulating or attaching materials, and any other sound-deadening, insulating, or protecting materials may be removed from the interior of the cargo/trunk/spare tire area.

h. Foot Pedals: Pedal covers may be added to the foot pedals. A driver's side dead pedal/foot rest may be added.

i. Fresh Air Ducting: Ducting may be added to provide fresh air to the driver/passenger compartment. This ducting shall be located in the driver and/or passenger window area, with no modifications to the bodywork. Only the cooling duct is permitted in the window area. It is not permitted to otherwise fill in the window area.

j. Radios: Audio systems may be removed in their entirety. Two-way radios are permitted.

k. Ballast: Ballast may be used. All ballast shall be located in the front passenger footwell/seating area, aft of the firewall and any footwell angle, and forward of the front passenger seat location. Alternatively, ballast may be mounted using the passenger seat mounting points, if the passenger seat is removed.

1. Ballast shall be in segments no heavier than fifty (50) pounds, and shall be capable of being removed to be weighed apart from the car. Ballast may not exceed one hundred pounds maximum.

2. Each segment shall be fastened with a minimum of two (2) one-half (1/2) inch bolts and positive lock nuts of SAE Grade 5 or better unless the ballast is mounted using the four (4) passenger seat mounting points and replacement bolts, and shall utilize large-diameter, load-distributing washers.

3. Holes may be drilled in the front passenger footwell/seating area floorpan for purposes of mounting the ballast only, and said floorpan may be reinforced as required for the same purpose.

9. SAFETY

a. Roll Cage: No deformation of the interior body panels is permitted to accommodate roll cage installation, except that the horizontal part of the interior roof sheet metal next to and outboard of the driver's and/or passenger's head between the top of the "B" pillar and the top of the "A" pillar, may be pounded or pushed upward to accommodate the roll cage side hoops or halo. The intent of this allowed deformation is strictly to allow for more headroom for the driver and/or passenger.

b. Steering Lock: Steering lock mechanisms shall be removed.

c. Fuel Cell: Fuel cells are permitted. See GCR Section 9.3.26. for requirements. If a fuel cell is installed the original fuel tank shall be removed.

d. Spare Tire: Spare tire, tools, and other "loose" items and their associated attaching hardware and bracketry may be removed.

e. Air Bags: Air bag systems shall be disarmed and may be removed.

E. MEASUREMENT STANDARDS

Measurement standards shall be as specified in GCR Appendix C. with the following exceptions: Wheelbase has a tolerance of + 2"/- 1".