

Can you design a made-up turbocharged economical gas vehicle from 2010 with:

- the type of body (i.e. Sedan, Coupe, Convertible, Wagon, or Hatchback)
- the make and model of the car
- car color
- panel material (i.e. Steel, Treated Steel, Fibre Glass, Aluminium, Partial Aluminium, Partial Carbon Fiber, or Carbon Fiber)
- chassis type (i.e. Ladder, Monocoque, Space Frame, Semi Space Frame, or Partial Monocoque)
- chassis material (i.e. Steel, Galvanized Steel, Corrosion Resistant Steel, AHS Steel, Light AHS Steel, Glued Aluminium, or Carbon Fiber)
- engine placement (i.e. Front Transverse, Front Longitudinal, Mid Transverse, Mid Longitudinal, or Rear Longitudinal)
- front suspension type (i.e. Solid Axle Coil, Solid Axle Leaf, MacPherson Strut, Double Wishbone, or Pushrod)
- rear suspension type (i.e. Solid Axle Coil, Solid Axle Leaf, Semi Trailing Arm, Torsion Beam, Double Wishbone, MultiLink, or Pushrod)
- chassis quality level from -15 to +15
- type of engine (i.e. I3, I4, I5, I6, V 60° V6, V 60° V8, V 60° V12, V 90° V6, V 90° V8, V 90° V10, V 90° V16, Boxer 4, or Boxer 6)
- engine block material (i.e. Cast Iron, Aluminium Heavy, Aluminium Light, Aluminium Billet, AlSi Heavy, AlSi Light, Magnesium)
- engine displacement (with bore and stroke in mm)
- type of engine heads (i.e. OHV, DAOHC, SOHC, or DOHC)
- how many valves per cylinder from 2, 4, or 5
- engine head material (i.e. Cast Iron, Aluminium, or AlSi)
- engine block quality level from -15 to +15
- crankshaft material (i.e. Cast Iron, Cast Iron Heavy, Forged Steel Light, Forged Steel, Forged Steel Heavy, Billet Steel, or Billet Steel Heavy)
- connecting rod material (i.e. Cast Light, Cast, Cast Heavy, Forged Light, Forged, Forged Heavy, or Titanium)
- piston material (i.e. Cast Light, Cast, Cast Heavy, Forged Heavy, Hypereutectic Cast, Low Friction Cast, or Forged Light)
- type of balancing mass (i.e. None, Harmonic Damper, or Balance Shafts)
- balancing mass slider from 0 to 100
- bottom end quality level from -15 to +15
- compression ratio from 5.0:1 to 16.0:1
- cam profile from 0 to 100
- spring and lifters from 0 to 100
- will it have VVT for the intake, all cams, or not
- will it have VVL
- if the engine uses VVL, what is its VVL profile from 0 to 100 and an RPM target point from 2000 to 12000 RPM
- engine RPM limit from 2000 to 12000 RPM
- top end quality level from -15 to +15
- what turbocharger setup is used for this engine? Single, Double, or Quad turbo?
- turbocharger's boost system from Wastegate, Boost Control, or Smart Boost
- intercooler size from 0 to 12,100 HP
- will the turbo use a Standard Geometry, Twin Scroll, or Variable Geometry
- will the turbo use a Journal Bearing or Ball Bearing
- compressor size from 25.0mm to 120.0mm
- turbine size from 30.0mm to 120.0mm
- A/R ratio & compressor trim from 0 to 100
- boost level from 0.73 psi to 72.52 psi
- turbocharger quality rating from -15 to +15
- what type of fuel system? Either carbureted or fuel injected?
- if carbureted, will it be a single barrel, single barrel eco, 2 barrel, DCOE, or 4 barrel?
- if carbureted, how many carburetors will be applied to this engine? Such as Single, Twin, Triple, Quad, 6, or 8 carburetors?
- carb size from 0 to 100 only if it is carbureted
- if fuel injected, will it be mechanical, single point, multi point, or direct injected?
- if fuel injected, how many fuel injectors will be applied to this engine? Such

as Single, Twin, or Throttle Per Cylinder?

- type of intake manifold (i.e. Compact, Standard Low, Standard Mid, Variable, Performance Mid, Performance High, or Race)
- manifold size from 0 to 100
- fuel octane rating it requires to run on
- ignition timing margin from -5.0 to +5.0 (-5.0 advanced it and +5.0 retards ignition timing)
- fuel map level from 0 to 100 (0 makes it as lean as possible and 100 makes it as rich as possible)
- fuel system quality level from -15 to +15
- type of headers (i.e. Turbo Compact, Turbo Mid, or Tubular Race)
- header size from 0 to 100
- single or dual exhaust
- exhaust diameter from 12.7mm to 203mm
- type of catalytic converter (i.e. None, Two-Way, Three-Way, High Flow Three-Way, Three-Way + Pre-Cat, or High Flow 3-Way + Pre-Cat)
- first muffler option from None, Baffled, Reverse Flow, or Straight Through
- second muffler option from None, Baffled, Reverse Flow, or Straight Through
- exhaust quality level from -15 to +15
- drive type (i.e. FWD, RWD, 4x4, AWD Viscous, AWD Helical, AWD On-Demand, or AWD Advanced)
- gearbox with how many gears (i.e. Manual, Automatic, Advanced Automatic, AMT, DCT, Sequential, or CVT)
- estimated top speed
- type of differential (i.e. Open, Manual Locker, Clutched LSD, Clutched Race LSD, Helical LSD, Viscous LSD, or Electric LSD)
- if the drive type is AWD Viscous, AWD Helical, or AWD Advanced, what is the front & rear AWD Power Split percentage?
- drivetrain quality level from -15 to +15
- type of tire (i.e. Chunky Offroad, All-Terrain, Utility, Hard Long Life, Medium Compound, Sports Compound, or Semi Slicks)
- tire width, diameter, and rim size
- rim material (i.e. Steel, Magnesium, Alloy, or Carbon Fibre)
- tire quality level from -15 to +15
- types of brakes for the front and back (i.e. Drum SLS, Drum 2LS, Solid Disc, Vented Disc, or Carbon Ceramic. Include piston count and brake diameter size.
- front brake force percentage from 50% to 150%
- rear brake force percentage from 20% to 150%
- brake pad type from 0 to 100 (0 leans the brakes towards the comfort setting which could increase brake fade, 100 leans the brakes towards the race setting which reduces brake fade but decreases ride comfort)
- brake quality level from -15 to +15
- type of undertray (i.e. None, Offroad, Semi Clad, Fully Clad, Flow Optimized, Sport, or Race Diffuser)
- are there cooling flaps or not?
- engine airflow percentage from 0% to 100%
- brake airflow percentage from 0% to 100%
- aerodynamics quality level from -15 to +15
- if the car is a convertible, what type of convertible roof system is used? (i.e. Detactable, Manual, Automatic, or Hidden)
- seating count (list how many seats for the front, middle, and rear passengers if applicable)
- type of interior (i.e. Basic, Standard, Premium, Sport, Luxury, Hand Made, or Race)
- type of entertainment (i.e. None, AM Radio, Phonograph, 8-Track, Cassette, CD, SatNav, Infotainment, or HUD)
- are the types of entertainment basic, standard, premium, or luxury?
- interior quality level from -15 to +15
- type of steering system (i.e. Manual Ball, Manual R&P, Hydraulic Ball, Hydraulic R&P, Variable Hydraulic, Electric, or Electric Variable)
- traction aids (i.e. None, ABS, TC + ABS, ESC, or ESC + Launch Control)
- traction aids quality level from -15 to +15
- safety standards from None, or the 1940s to 2010s
- are these safety standards basic, standard, or advanced?

- safety level quality level from -15 to +15
- optimize weight slider from 0 to 100
- weight distribution slider from 0 to 100
- type of springs (i.e. Standard, Progressive, Hydropneumatic, Air, Active Sport, or Active Comfort)
- type of dampers (i.e. Twin-Tube, Gas Mono-Tube, Adaptive, or Semi Active)
- type of sway bars (i.e. Passive Semi Active, Offroad, or Active)
- suspension present type (i.e. Comfort, Normal, Sport, Utility, Offroad, or Race)
- suspension quality level from -15 to +15