

different group of vehicles within a make or car division in accordance with that agency's 2001 model year pickup, van (cargo vans and passenger vans are considered separate truck lines), and special purpose vehicle criteria.

18. "Variants of existing engines" means versions of an existing basic engine that differ from that engine in terms of displacement, method of aspiration, induction system or that weigh at least 25 pounds more or less than that engine.

## II. Assumptions

All assumptions concerning emission standards, damageability regulations, safety standards, etc., should be listed and described in detail by the respondent.

## III. Specifications—Passenger Car Data

Go to <http://www.nhtsa.dot.gov/cars/rules/CAFE/rulemaking.htm> for spreadsheet templates.

1. Identify all passenger car models offered for sale in MY 2003 whose production you project discontinuing before MY 2008 and identify the last model year in which each will be offered.

2. Identify all basic engines offered by respondent in MY 2003 passenger cars which respondent projects it will cease to offer for sale in passenger cars before MY 2008, and identify the last model year in which each will be offered.

3. For each model year 2003–2012, list all projected passenger car model types and provide the information specified below for each model type. Model types that are essentially identical except for their nameplates (e.g., Chrysler Sebring/Dodge Stratus) may be combined into one item. Engines having the same displacement but belonging to different engine families are to be grouped separately. Separate tables should be provided for domestic and import passenger car fleets. Within a domestic or import passenger car fleet, the vehicles are to be sorted first by passenger car line, second by basic engine, and third by transmission type. Spreadsheet templates can be found at <http://www.nhtsa.dot.gov/cars/rules/CAFE/rulemaking.htm>. These templates include codes and definitions for the data that the Agency is seeking.

### a. General Information

1. A unique identifying number or code assigned to each model.
2. Vehicle manufacturer.
3. Vehicle model (e.g., Camry)
4. Vehicle nameplate (e.g., Camry Solara)
5. Weighted average fuel economy
6. Engine code
  - (a) Engine manufacturer
  - (b) Engine name
  - (c) Engine's country of origin
  - (d) Fuel
  - (e) Engine oil viscosity
  - (f) Combustion cycle
  - (g) Air/fuel ratio
  - (h) Fuel system
  - (i) Aspiration
  - (j) Valvetrain design
  - (k) Valve actuation/timing
  - (l) Valve lift
  - (m) Number of engine cylinders
  - (n) Configuration
  - (o) Valves per cylinder

- (p) Cylinder deactivation
- (q) Engine displacement
- (r) Compression ratio (Min)
- (s) Compression ratio (Max)
- (t) Horsepower
- (u) Torque
7. Transmission code
  - (a) Transmission manufacturer
  - (b) Name of transmission
  - (c) Transmission's country of origin
  - (d) Transmission type
  - (e) Number of forward gears
  - (f) Control
  - (g) Logic
  - (h) Gear ratios for all forward gears
  - (i) Reverse gear ratio
  - (j) Torque converter ratio
  - (k) Axle ratio
  - (l) Torque converter lockup/bypass status
  - (m) Transmission fluid specification
  - (n) Transmission lubricant viscosity
8. Domestic or Import
  - b. Projected U.S. sales
  - c. Vehicle information
    1. Style (e.g., convertible, sedan, coupe)
    2. EPA Size Class
    3. Construction (e.g., Unibody, ladder)
    4. Drive (e.g., rear wheel drive, front wheel drive, all-wheel drive, 4-wheel drive)
    5. Final drive ratio
    6. N/V
    7. Front axle lubricant viscosity
    8. Rear axle lubricant viscosity
    9. Overall length (per code L103 of SAE J1100, revised July 2002)
    10. Overall width (per code W116 of SAE J1100, revised July 2002)
    11. Overall height (per code H100 of SAE J1100, revised July 2002)
    12. Wheelbase (per code L101 of SAE J1100, revised July 2002)
    13. Track width (front) (per code W101–1 of SAE J1100, revised July 2002)
    14. Track width (rear) (per code W101–2 of SAE J1100, revised July 2002)
    15. Ground clearance (per 49 CFR 323.5)
    16. Front axle clearance (per 49 CFR 323.5)
    17. Rear axle clearance (per 49 CFR 323.5)
    18. Angle of approach (per 49 CFR 323.5)
    19. Breakover angle (per 49 CFR 323.5)
    20. Angle of departure (per 49 CFR 323.5)
    21. Height of the center of gravity (per NCAP Static Stability Factor procedures)
    22. Curb weight, in lbs.
    23. Test weight, in lbs.
    24. Power absorption unit setting, in horsepower.
    25. Gross Vehicle Weight Rating, in lbs.
    26. Towing capacity (standard), in lbs.
    27. Towing capacity (maximum), in lbs.
    28. Payload, in lbs.
    29. Minimum designated seating positions
    30. Maximum designated seating positions
    31. Designated seating positions in the first row
      32. Cargo volume behind the front row in ft<sup>3</sup> (per Table 28 of SAE J1100, revised July 2002)
      33. Designated seating positions in the second row
      34. Capability of second row seats to fold flat
        35. Cargo volume behind the second row in ft<sup>3</sup> (per Table 28 of SAE J1100, revised July 2002)
        36. Designated seating positions in the third row

37. Capability of third row seats to fold flat

38. Cargo volume behind the third row in ft<sup>3</sup> (per Table 28 of SAE J1100, revised July 2002)

39. Enclosed volume in ft<sup>3</sup>

40. Passenger volume in ft<sup>3</sup> (The volume measured using SAE Recommended Practice J1100 as per EPA Fuel economy regulations, reg. 40 CFR 600.315–82 "Classes of Comparable Automobiles." This number is what automobile manufacturers calculate and submit to EPA.)

41. Cargo volume index (per Table 28 of SAE J1100, revised July 2002)

42. Open box length (per L506 of SAE J1100, revised July 2002)

43. Open box width (min) (per W201 of SAE J1100, revised July 2002)

44. Open box width (max) (per W500 of SAE J1100, revised July 2002)

45. Open box area

46. Open box height (per H503 of SAE J1100, revised July 2002)

47. Fuel capacity in gallons

48. Tire rolling resistance, Crr

49. Frontal area

50. Aerodynamic drag coefficient, Cd

d. Hybridization

1. Type

2. Voltage or pressure

3. Energy storage capacity, in MJ

4. Battery type

5. Energy transfer

6. Percentage of braking energy recovered and stored

7. Percentage of maximum motive power provided by stored energy system

e. Planning and assembly

1. Predecessor model

2. Last freshening

3. Next freshening

4. Last redesign

5. Next redesign

6. Domestic content

7. Final assembly city

8. Final assembly state

9. Final assembly country

f. Manufacturers' suggested retail price (in constant 2003 dollars)

g. Emissions

1. EPA class (LDV, LLDT, HLDT, MDPV)

2. EPA certification bin

3. LEV class

The agency also requests that each manufacturer provide an estimate of its overall domestic and passenger car CAFE for each model year. This estimate should be included as an entry in the spreadsheets that are submitted to the agency.

4. Does respondent project introducing any variants of existing basic engines or any new basic engines, other than those mentioned in your response to Question 3, in its passenger car fleets in MYs 2003–2012? If so, for each basic engine or variant indicate:

a. The projected year of introduction.

b. Type (e.g., spark ignition, direct injection diesel, 2-cycle, alternative fuel use).

c. Displacement. (If engine has variable displacement, please provide the minimum and maximum displacement)

d. Type of induction system (e.g., fuel injection with turbocharger, naturally aspirated).

e. Cylinder configuration (e.g., V–8, V–6, I–4).