

SIAM

**FUEL
ECONOMY
INFORMATION
BROCHURE**

SEPTEMBER 2008

USING THE FUEL ECONOMY INFORMATION BROCHURE

SIAM has developed this Fuel Economy information brochure to educate two-wheeler, car and utility vehicle buyers on the Fuel Economy Consumer Information. The Fuel Economy Consumer information would be displayed near the vehicle at the point of sale, ie where the vehicle is displayed and offered for sale. Brochure is additionally available on the web at www.siam.in. Each vehicle in these categories has a fuel economy estimate. These fuel economy estimates are based on laboratory testing. All vehicles are tested in the same manner to allow fair comparisons. However, there can be laboratory to laboratory variation.



WHY CONSIDER FUEL ECONOMY?

You could save considerable sums in fuel costs each year by choosing the most fuel-efficient vehicle from the options available to you. This would cumulate continuously over a vehicle's lifetime. Fuel-efficient models come in all shapes and sizes, so you need not sacrifice utility or size.

Strengthen National Energy Security

Buying a more fuel-efficient vehicle can help strengthen our national energy security by reducing our dependence on foreign oil. It is estimated that more than 80% of the oil used to produce the fuel for your tank is imported.



Protect the Environment

Burning fossil fuels such as petrol, diesel, compressed Natural Gas (CNG) or Liquefied Petroleum Gas (LPG) adds to greenhouse gases, mostly carbon dioxide (CO₂), to the Earth's atmosphere. Large-scale increases in greenhouse gases in the Earth's atmosphere can lead to global climate change. Vehicles with higher fuel consumption burn more fuel, creating more CO₂. Your vehicle creates a certain amount of CO₂ per litre of petrol, diesel, LPG or CNG it consumes. Therefore, you can reduce your contribution to global climate change by choosing a vehicle with lower fuel consumption.



FUEL ECONOMY CONSUMER INFORMATION

(Test Results of Rule 115 of CMVR)

Vehicle Manufacturer's Details

XYZ Motors Ltd.

Vehicle
Manufacturer's
name would be
mentioned

Model / Variant

**ABCD
CDI XS**

Name of the
model / variant
being displayed
would be
mentioned

Engine Displacement (cm³)

1850

Engine size in
Cubic Centimeter
would be
mentioned

Fuel Type

Petrol

Fuel used for running
the vehicle would be
mentioned. For
Bi-fuel vehicles both
the fuel types would
be mentioned

Fuel Economy (Under Standard Test Conditions)

16.8 km/l

Fuel Economy upto
one decimal place
would be mentioned
in km/l for Petrol,
Diesel & Liquefied
Petroleum Gas (LPG),
in km / kg. for
Compressed Natural
Gas (CNG) and in
km/kw - hr for Electric
vehicles.

Disclaimers:

1. The values declared above are the extract of the results that have been obtained in a mandatory emission test specified in Rule 115 of Central Motor Vehicle Rule 1989 under controlled conditions using a reference fuel at an agency authorized by Rule 126 of the said Rules. The values obtained by users will differ from these values due to infinite variables such as driving habits, road and traffic conditions, fuel quality, maintenance practices, loading pattern, ambient conditions and usual engineering tolerances on components and so on.
2. The values declared above have been obtained on one of the variants of the displayed make/model. Users may obtain different values on other variants of this make/model.
3. The vehicle manufacturer and its authorized dealers shall not be liable for any difference in fuel consumption values due to any of the aforesaid variables and no claim shall lie thereon.
4. The information provided above is the property of the aforementioned vehicle manufacturer. This information is for user information only and may not be quoted without prior permission of the vehicle manufacturer.
5. The values indicated herein above are subject to change without notice due to changes in the parts related to fuel economy and such change can be made by vehicle manufacturer at its own discretion, without notice.
6. The accuracy or correctness of the same values is not undertaken or guaranteed when not tested under identical conditions.

This information is issued in public interest by the vehicle manufacturer
as a member of Society of Indian Automobile Manufacturers (SIAM)

YOUR FUEL ECONOMY WILL VARY

Since the Fuel Economy is measured in controlled conditions, your vehicle's fuel economy will almost certainly vary in your use. Fuel consumption is not a fixed number; it varies significantly based on where you drive, how you drive, and other factors. Thus, it is impossible for one set of estimates to predict fuel economy precisely for all drivers in all environments.

For example, the following factors can decrease your vehicle's fuel economy:



**Aggressive Driving
(Hard Acceleration and Braking)**



Excessive Idling



**Cold Weather Conditions
(Engines are more efficient
when warmed up)**



Driving with Heavy Loads



**Running Improperly
Maintained Vehicle**

In addition, small variations in vehicle manufacturing can cause kmpl variations in the same make and model, and some vehicles don't attain maximum fuel economy until they are driven for certain kilometers, please confirm the same from your dealer.

So, please remember that the declared values are a useful tool for comparing vehicles when buying a two-wheeler, a car or a utility vehicle, but they may not accurately predict the kmpl *you* will get. Please study the disclaimers given in the lower section of the table to fully understand the significance of the value displayed.

OTHER FUELLING OPTIONS

Ethanol Blends E05

Ethanol is an alcohol fuel made from by molasses which is obtained during production of sugar from sugarcane. It may also be made from “cellulosic biomass” such as trees and grasses in the near future. The use of ethanol can reduce India's dependence on foreign oil and reduce greenhouse gases.

E5 is a blend of 5% ethanol and 95% petrol sold in many parts of the country. All auto manufacturers approve the use of blends of 5% ethanol or less in their petrol vehicles. There is no noticeable difference in vehicle performance when low-level ethanol blends are used. However, if vehicles operate on higher blends of ethanol you may experience drop in kmpl because of ethanol's lower energy content. Use of ethanol blends may reduce fuel economy slightly.



Biodiesel

Biodiesel would be a diesel-replacement fuel produced from Jatropha or Karanja seeds. It emits fewer greenhouse gases than petroleum diesel and, since it is made domestically from renewable resources, increases national energy security.

Biodiesel can be blended at a ratio with petroleum diesel upto 5%. Most vehicle manufacturers do not yet recommend using bio-diesel blends greater than B5, and doing so may void the engine warranty. Check your owner's manual or with your vehicle manufacturer to determine the right blend for your vehicle.

Purchase commercial-grade biodiesel from a reputable dealer when available. Never refuel with clean or used grease or vegetable oil that has not been converted to biodiesel. It will damage your engine. Use of biodiesel blends may reduce fuel economy slightly.



Diesel Vehicles

Diesel-powered vehicles typically get 30 - 35% more kmpl than comparable vehicles powered by petrol. Diesel engines are inherently more energy efficient, and diesel fuel contains 10% more energy per litre than Petrol. In addition, new advances in diesel engine technology have improved performance, reduced engine noise and fuel odour, and decreased emissions of harmful air pollutants. New ultra-low sulphur diesel fuels would further help reduce emissions from these vehicles.

Hybrid-Electric Vehicles

Hybrid Electric Vehicles (HEV) combine the best features of the internal combustion engine with an electric motor and can significantly improve fuel economy without sacrificing performance or driving range. HEVs are primarily propelled by an internal combustion engine, just like conventional vehicles. However, they also convert energy normally wasted during coasting and braking into electricity, which is stored in a battery until needed by the electric motor. The electric motor assists the engine when accelerating or hill climbing and at low speeds where internal combustion engines are least efficient. Unlike all-electric vehicles, HEVs does not need to be generally plugged into an external source of electricity to be recharged; conventional petrol / diesel and regenerative braking provide all the energy the vehicle needs.

CNG & LPG Vehicles

CNG fuel is normally dispensed in kgs. Therefore, the fuel economy values are shown in km per kg. However LPG fuel is normally dispensed in litres and therefore, the fuel economy values are shown in km per litre.

TIPS FOR IMPROVING FUEL ECONOMY

Keep Your Vehicle in Shape

- Servicing of a vehicle that is noticeably out of tune can significantly improve fuel economy.
- Repairing a faulty oxygen sensor can improve fuel economy by much more.
- Replacing a clogged air filter can significantly improve fuel economy.
- Keeping tyres inflated to the recommended pressure and using the recommended grade of motor oil can improve fuel economy. Check and maintain manufacturer's recommended tyre pressure.



Drive More Efficiently

- Aggressive driving (speeding or rapid acceleration and braking) can decrease your fuel economy.
- Avoid over speeding, aerodynamic losses decrease fuel economy considerably near the top speed of the vehicle.
- Avoid idling, idling gets 0 kilometer per litre



Plan and Combine Trips

A warmed-up engine is more fuel efficient than a cold one. Many short trips taken from a cold start can use twice as much fuel as one multipurpose trip covering the same distance when the engine is warmed up and efficient.

Note: Letting your vehicle idle to warm-up doesn't help your fuel economy, it actually uses more fuel and creates more pollution.



This information is issued voluntarily in Consumer Interest

(Updates may be required in future based on technology or regulatory changes)

Society of Indian Automobile Manufacturers

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