## U.S. Environmental Protection Agency

National Vehicle and Fuel Emissions Laboratory

## Annual Emissions and Fuel Consumption for an "Average" Passenger Car ${ }^{1}$

| Pollutant | Problem | Amount ${ }^{2}$ per mile (mi) | $\underline{\text { Miles }}^{3}$ | Calculation | Pollution/Fuel Consumption ${ }^{4}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Hydrocarbons | Urban ozone (smog) <br> Air toxics | 2.9 grams (g) | 12,500 | $2.9 \mathrm{~g} / \mathrm{mi} \mathrm{X} 12,500 \mathrm{mi} \mathrm{X} 1 \mathrm{lb} / 454 \mathrm{~g}$ | $=80$ pounds of hydrocarbons |
| Carbon Monoxide | Poisonous gas | 22 grams | 12,500 | $22 \mathrm{~g} / \mathrm{mi} \mathrm{X} \mathrm{12,500} \mathrm{mi} \mathrm{X} 1 \mathrm{lb} / 454 \mathrm{~g}$ | $=606$ pounds of carbon monoxide |
| Nitrogen Oxides | Urban ozone (smog) Acid rain | 1.5 grams | 12,500 | $1.5 \mathrm{~g} / \mathrm{mi} \mathrm{X} 12,500 \mathrm{mi} \mathrm{X} 1 \mathrm{lb} / 454 \mathrm{~g}$ | $=41$ pounds of nitrogen oxides |
| Carbon Dioxide | Global warming | 0.8 pound (lb) | 12,500 | $0.8 \mathrm{lb} / \mathrm{mi} \mathrm{X} \mathrm{12,500} \mathrm{mi}$ | $=10,000$ pounds of carbon dioxide |
| Gasoline | Imported oil | 0.044 gallon | 12,500 | 0.044 gallon/mi X 12,500 mi | = 550 gallons of gasoline |

## Notes:

1. These are averages. Individual vehicles may travel more or less miles and may emit more or less pollution per mile than indicated here. Emission factors and pollution/fuel consumption totals may differ slightly from original sources due to rounding.
2. The emission factors used here come from standard EPA emission models. They assume an "average," properly maintained car on the road in 1997, operating on typical gasoline on a summer day $\left(72-96^{\circ} \mathrm{F}\right)$. Emissions may be higher in very hot or very cold weather
3. Average annual mileage source: EPA Office of Mobile Sources Assessment and Modeling Division.
4. Fuel consumption is based on average in-use passenger car fuel economy of 22.5 miles per gallon. Source: US DOT/FHA, Highway Statistics 1995.
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## Annual Emissions and Fuel Consumption for an "Average" Light Truck ${ }^{1}$

** "Light trucks" include popular passenger vehicles such as pickups, vans, minivans, and sports-utility vehicles **

| Pollutant | Problem | Amount ${ }^{2}$ <br> per mile (mi) | Miles ${ }^{3}$ | Calculation | Pollution/Fuel Consumption ${ }^{4}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Hydrocarbons | Urban ozone (smog) Air toxics | 3.7 grams(g) | 14,000 | $3.7 \mathrm{~g} / \mathrm{mi} \mathrm{X} 14,000 \mathrm{mi} \mathrm{X} 1 \mathrm{lb} / 454 \mathrm{~g}$ | = 114 pounds of hydrocarbons |
| Carbon Monoxide | Poisonous gas | 29 grams | 14,000 | $29 \mathrm{~g} / \mathrm{mi} \mathrm{X} 14,000 \mathrm{mi} \mathrm{X} 1 \mathrm{lb} / 454 \mathrm{~g}$ | $=894$ pounds of carbon monoxide |
| Nitrogen Oxides | Urban ozone (smog) Acid rain | 1.9 grams | 14,000 | $1.9 \mathrm{~g} / \mathrm{mi} \mathrm{X} 14,000 \mathrm{mi} \mathrm{X} 1 \mathrm{lb} / 454 \mathrm{~g}$ | = 59 pounds of nitrogen oxides |
| Carbon Dioxide | Global warming | 1.2 pound (lb) | 14,000 | $1.2 \mathrm{lb} / \mathrm{mi} \mathrm{X} \mathrm{14,000} \mathrm{mi}$ | $=16,800$ pounds of carbon dioxide |
| Gasoline | Imported oil | 0.065 gallon | 14,000 | 0.065 gallon/mi X 14,000 mi | $=915$ gallons of gasoline |

## Notes:

1. These values are averages. Individual vehicles may travel more or less miles and may emit more or less pollution per mile than indicated here. Emission factors and pollution/fuel consumption totals may differ slightly from original sources due to rounding.
2. The emission factors used here come from standard EPA emission models. They assume an "average," properly maintained truck on the road in 1997, operating on typical gasoline on a summer day $\left(72-96^{\circ} \mathrm{F}\right)$. Emissions may be higher in very hot or very cold weather.
3. Average annual mileage source: EPA Office of Mobile Sources Assessment and Modeling Division.
4. Fuel consumption is based on average in-use light truck fuel economy of 15.3 miles per gallon. Source: US DOT/FHA, Highway Statistics 1995.

