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**CarMD.com Corp. Reveals Most Common “Check Engine” Light Failures and Fixes with First Annual Vehicle Health Index™**

**Nationwide and regional rankings of repair and reliability stats for 1996–2010 show cars lasting longer and drivers ignoring small repairs**

**FOUNTAIN VALLEY, Calif. (Apr. 27, 2011)** – CarMD.com Corp., a leading provider of automotive tools and information, today announced the release of the first annual **CarMD® Vehicle Health Index™**, providing the industry and consumers with complete visibility into the often misunderstood “check engine” light. This comprehensive annual index reveals and ranks the most common automotive failures illuminating the “check engine” light, along with the fixes and repair costs associated with each incident. The April 2011 CarMD Vehicle Health Index summarizes roughly a quarter-million fixes and diagnostic trouble code (DTC) scenarios for 1996 and newer foreign and domestic vehicles in the U.S. The largest database of its kind, the Index has been compiled and validated by CarMD’s nationwide network of Automotive Service Excellence-certified technicians. It is being released to help consumers make better-informed purchase and repair decisions, and stay one step ahead of what may happen to their car in the future. It is now available at <http://corp.carmd.com>.

“As our nationwide network of automotive technicians diagnose and repair vehicles, they upload information to our online system, which enables CarMD to create an unprecedented compilation of data and level of transparency never before available,” said Art Jacobsen, vice president, CarMD.com Corp. “We are pleased to share this data publicly for the first time, and believe it will be useful to consumers, automotive technicians and the industry as they maintain and evaluate new and used vehicles.”

The majority of the top five most common failures and fixes from the April 2011 CarMD® Vehicle Health Index are related to durability vs. faulty parts, supporting industry statistics that consumers are holding onto cars longer and manufacturers are making vehicles that last longer. The Index also demonstrates that car owners are ignoring small problems that significantly reduce gas mileage, but also result in more expensive, catastrophic repairs. Durable parts, which should last longer, are failing more frequently due to lack of maintenance. The Index supports results from a 2010 CarMD survey that found 64% of U.S. adults who ever owned/leased a vehicle admitted to having put off automotive maintenance/repair at one time or another. With the average age of vehicles reaching 10.6 years, the most common failures and fixes illustrate the impact of maintenance on gas mileage, safety, the environment and costs. Additionally, as hybrids are aging and approaching 10 years on the market, two out of the top 10 most expensive repairs are for hybrids.

“While other organizations provide valuable information on consumer satisfaction, buyer behavior, product quality and even vehicle history reports, no organization – until now, has put its finger on the pulse of the raw data associated with vehicle failure and repair issues,” said Dr. Michael St. Denis, president at Revecorp Inc., and a recognized expert in vehicle inspection and maintenance programs. “CarMD should be commended for making this data public as it significantly adds to the visibility of vehicle reliability, and alerts consumers and professionals to the vital trends and analysis important to vehicle health and safety. The benchmarking capabilities of this index will only continue to increase in value as we compare and contrast vehicle reliability with actual historical data.”

**Key Findings**

In 2010, for the first time in 12 years the gas gap is no longer the most common culprit for “check engine” light issues on 1996-2010 vehicles. Instead, misfire accounted for over 13% of auto failures in 2010. CarMD’s automotive service excellence (ASE) certified technicians note that many times a repair for a misfire can be as simple as replacing a spark plug or spark plug wire for only a few dollars. However, if ignored, it can ultimately cause the failure of the catalytic converter(s), which often costs \$2,000 to repair. “Replace catalytic converter(s)” accounted for over 6% of repairs in 2010, and appeared in the top three fixes for all geographic regions studied.

**(MORE)**

## CarMD.com Debuts CarMD® Vehicle Health Index™ -- 2-2-2

The following are additional highlights from the Index:

### ➤ **Most Common Repair Services / Fixes**

- **Four out of five of the most common automotive repairs are related to age, vehicle longevity and durability** – 1) Replace oxygen (O2) sensor (9.34%), 3) replace catalytic converter (6.40%), 4) replace mass air flow sensor (4.36%) and 5) replace spark plugs/wires (3.71%).
- From 1998-2009, a loose, missing or damaged gas cap was the no. 1 reason for “check engine” related repairs. Now ranked as the 2<sup>nd</sup> most common repair, gas cap problems cause 147 million gallons of gas to evaporate each year. If left unchecked they can result in a 0.5% decrease in gas mileage and harm the environment.
- In 2010, the no. 1 most common service repair became “replace O2 sensor” (9.34%), edging out gas cap that moved to the no. 2 spot (9.28%). It monitors the amount of unburned oxygen in the exhaust and tells a car’s computer when there is either too much, or not enough fuel. A faulty O2 sensor costs less than \$200 to fix, including parts and labor, but can lead to as much as a 40 percent reduction in gas mileage, or nearly \$700/year in wasted fuel.
- The no. 3 most common repair, “replace catalytic converter,” points to consumers needlessly putting off maintenance. A catalytic converter normally won’t fail unless related parts, like a spark plug, are ignored too long. Replacement costs upwards of \$2,000 to repair.

### ➤ **Repair Service Costs**

- Overall repair costs are down nearly 16% from a high point in 2006, an indication that repair shop technicians are becoming more adept at using on-board diagnostics to perform more efficient repairs. In 2010, consumers paid about 1% less for total auto repair costs versus 2009, with a 4% increase in labor and a 3.6% dip in parts costs.
- Drivers in the Southwest pay about 10% more than drivers in the Northeast and 16% more than drivers in the Midwest for repairs. Southwest labor costs are higher as are the type of repairs due to dry air, build up and dust, such as clogged mass airflow sensor, which shows up more frequently and increases costs.

### ➤ **Most Expensive Repair Services / Fixes**

- The second most expensive car repair for 2010 is “replace hybrid inverter assembly” (>\$7,000) and no. 6 is “replace hybrid battery,” (>\$2,700). Hybrid repairs can be very pricey due to a limited number of available parts and people trained to work on them. While hybrid repairs tend to be much more expensive than fixing gas-powered cars, they do occur much less frequently. As ‘green’ vehicles continue to become more popular, and the technology becomes standard in the marketplace, repair costs will come down.
- The most expensive repair from 1996-2010 was “remove cylinder and inspect/replace as needed” (\$8,200). While expensive, it is not a common fix, representing very few repairs in the database. Conversely, the least expensive fix, also one of the most common, is “inspect gas cap/tighten or replace as needed” (< \$3.00 to fix in most cases).

### ➤ **Most Common Diagnostic Trouble Codes (DTCs)**

- “System Too Lean” is the most common diagnostic trouble code (DTC) for 1996-2010 vehicles. A “System Too Lean” code may be triggered by a range of issues from a dirty air filter to a faulty Mass Air Flow sensor, which measures the amount of air supplied to the engine and may result in lack of power, hesitation and surges during acceleration. If not fixed, a “System Too Lean” code, can lead to a 10% to 25% reduction in miles per gallon, and expensive repairs.

The CarMD® Vehicle Health Index is independent of and neutral to any manufacturer, and based solely on downloaded information from each vehicle’s government-mandated onboard diagnostic computer, combined with uploaded repair information from independent, certified automotive service excellence technicians.

### **About The CarMD Vehicle Health Index**

Beginning in 1996, the U.S. government mandated that on-board diagnostics (OBD2) be included on all foreign and domestic cars, light trucks, minivans and SUVs driven in the U.S. This universal technology is designed to detect malfunctions, set a diagnostic trouble code (DTC) and turn on the “check engine” light if there is a problem. This system provides vital health and safety information for roughly 80 percent of a vehicle’s systems, and is installed on about 80 percent of the vehicles in the U.S. today. On a daily basis, a nationwide network of certified technicians recommend, confirm and upload repairs and costs by region to the CarMD database. As a result, CarMD has built the largest, most up-to-date database of DTCs, expert fixes and repair costs, from which it draws the CarMD® Vehicle Health Index. CarMD will release this data each April, during National Car Care Awareness Month, to provide vehicle owners and the industry with the most in-depth view of vehicle health and repair. For more information, including a complete overview of methodology, visit <http://corp.carmd.com>.