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CarMD® Vehicle Health Index™ Highlights Importance for Drivers to Heed Dashboard Warnings as Check Engine Repair Costs Rise 6.7 Percent Nationwide

Polar Vortex-stricken Midwest and Northeast see 9 percent hike in car repair costs, but hybrid repairs drop as much as 28 percent

IRVINE, Calif. (Apr. 9, 2014) – CarMD, provider of leading-edge car repair data and Software as a Service (SaaS) solutions, today released its **2014 CarMD® Vehicle Health Index™** report on common check engine-related car repairs, associated costs and annual trends for model year 1996 to current vehicles. For the second year in a row, 2013 saw an increase in car repair costs that were up 6.7 percent overall, comprised of a 13 percent uptick in labor costs and 3 percent increase in parts. The oxygen sensor, which can negatively impact fuel economy by as much as 40 percent, remained the most common reason for check engine light repairs. For the fourth consecutive year hybrid repair costs declined – this year by as much as 28 percent. This Index also found that type and frequency of repairs were impacted by weather extremes, consumer driving and repair behavior, and vehicle age.

"Thanks to today's technology, consumers and fleet manager have access to more information than ever before to help them take a proactive role to extend vehicle life and minimize cost of car ownership," says Doug Sobieski, CarMD's chief marketing officer. "CarMD's data highlights the importance of making minor adjustments to your car maintenance and repair routines to account for driving habits, type of vehicle and even climate. This CarMD Vehicle Health Index demonstrates how ignoring dashboard warning lights can drive up the cost of ownership with increased fuel usage and a domino effect on needed repairs."

The 2014 CarMD Vehicle Health Index analyzed more than 145,000 repairs reported to and validated by CarMD's nationwide network of factory-trained, Automotive Service Excellence (ASE)-certified technicians from Jan. 1, 2013 to Dec. 31, 2013. The full Index, including the 25 most common check engine-related repairs and a list of most common repairs by region, is available at http://corp.carmd.com. The following are highlights from this year's report.

This past year saw temperature extremes with the fourth warmest year on record. It also had more daily record lows than highs for the first time in 20 years[1], with record-breaking cold across much of the East, Midwest and parts of the South. Repair costs were up across each U.S. region, but the Polar vortex-stricken Northeast and Midwest regions saw a 9 percent increase in average car repair costs, while the South and West each only incurred a 5 percent increase. Visits to the repair shop were down in the Northeast and Midwest regions whose drivers took their cars in for diagnosis and repairs 26 percent and 17 percent less respectively, but battery and thermostat-related repairs were up in these two regions. Drivers in the West had 12 percent fewer check engine-related problems repaired, but car repairs were up 8 percent in the South.

"Replace thermostat" moved up five spots from no. 18 to no. 13 among most common repairs in 2013. The thermostat, which is responsible for allowing coolant to flow in and out of the car's engine, is susceptible to overheating, sludge, age and can even freeze up during very cold weather. The two repairs that dipped the most in CarMD's Index ranking were "remove aftermarket alarm" and "inspect for faulty wiring," both of which dropped eight spots to no. 15 and no. 20 respectively, a trend CarMD attributes to improvements in features and quality by automotive manufacturers on newer-model vehicles.

(more)

[1] Source: National Climatic Data Center and National Oceanic and Atmospheric Administration

CarMD Releases 2014 Vehicle Health Index – 2-2-2

The most expensive repair seen by CarMD's technician network in 2013 was "replace transmission assembly and reprogram engine control module" ($5,984). Transmission-related repairs accounted for six of the 10 most expensive repairs, but saw a 10 percent reduction in frequency, also a likely a result of the surge in number of newer cars on the road. While most car repair costs were up, hybrid repairs continue to drop with increased volume of hybrids on the road, as well as more parts available and people trained to service them. Hybrids accounted for three of the top 10 most expensive repairs in 2013 as opposed to four of the top 10 the previous year. In 2011, "replace hybrid inverter assembly" cost $4,098 on average to repair; in 2012 the same repair was $3,927; and in 2013 this repair cost $2,826. All but one of the 10 most common repairs saw an increase in repair costs, as the no. 1 most common repair "replace oxygen sensor" decreased 11 percent in 2013 over the previous year.

The CarMD database and Index also tracks recall-related repair trends. While it is not typically a common repair, General Motors vehicles accounted for 61.5 percent of "replace ignition switch" repairs reported to CarMD's database in 2013.

Paying attention to small problems, recommended maintenance schedules, recalls and dashboard warning lights can all contribute to extending vehicle life and minimizing cost of ownership, whether you're an individual driver or fleet manager. Each of the five most common check engine problems reported by this CarMD Vehicle Health Index can negatively impact fuel usage and potentially cause a domino effect of needed repairs if left unaddressed. Here are five money-saving examples of why it's important to address the five most common check engine problems early:

1. The no. 1 most common repair, **replace oxygen sensor** ($260 on average to repair) can lead to a 40 percent reduction in gas mileage if ignored, which equates to roughly $900 per year in extra fuel costs. A faulty O2 sensor can also lead to costly catalytic converter damage ($1,154 on average to repair), ultimately costing as much as $2,300 in total if left unchecked.
2. The no. 2 most common check engine "repair," **tighten or replace fuel cap**, costs on average only $0.11 to address, meaning most just need to be tightened versus replaced. Ignoring a loose gas cap can result in roughly a 1 percent dip in fuel economy costing as much as a $100 extra per year at the pump. Not realizing a loose gas cap may be the root cause of the check engine light can also result in an unnecessary trip to the repair shop with associated diagnostic fees.
3. The average cost to **replace catalytic converter,** the no. 3 most common repair, rose 5 percent from $1,101 in 2012 to $1,154 in 2013. In most cases, a catalytic converter won't fail unless a related part like a bad spark plug or O2 sensor is ignored for too long.
4. **Replace spark plug(s) and wire(s)** moves up to the no. 4 most common repair. When the weather turns cold fuel doesn't vaporize as easily, so droplets can form and foul the plug. The cost to replace plugs and wires jumped nearly 6 percent to $361 in 2013. A prime example of how ignoring a smaller problem can result in the need for more than one repair, if left unaddressed a spark plug can result in eventual ignition coil and catalytic converter failure. The no. 7 most common repair, the cost to replace both ignition coil(s) and spark plug(s) is $420 on average. Add a catalytic converter replacement and the cost can be as much as $1,500.
5. The no. 5 most common repair is **replace mass air flow sensor,** which is responsible for metering the air coming into the car's engine and determining how much fuel to inject into the engine. When malfunctioning, it can lower fuel economy by as much as 25 percent. Mass air flow sensor replacement costs have jumped roughly 3 percent from $410 to $423 over the past year, but are vital to saving money at the pump.

About CarMD

Based in Irvine, Calif., CarMD is a leading-edge Software as a Service (SaaS) solutions provider. Our applications leverage and empower the capabilities of the on-board diagnostics (OBD2) port. This enables our partners and their vehicle owners to implement solutions featuring industry-changing innovations and ideas. Our solutions are developed to service the automotive Telematics industry. Using the OBD2 port, CarMD's easily deployed software reads and delivers information on the health and scheduled maintenance of the vehicle. CarMD's business solutions also include an array of fleet management products. Our vehicle asset management, health and service management products are designed to lower the cost of vehicle ownership. CarMD's network of Automotive Service Excellence (ASE)-certified technicians has built the largest, most up-to-date database of diagnostic trouble codes, expert repairs and related costs, from which CarMD draws its Vehicle Health Index™, and supports its SaaS solutions. The Index is released each April in conjunction with National Car Care Awareness Month to provide vehicle owners and the industry with a comprehensive and independent report on vehicle repair trends. This 2014 Index statistically analyzes more than 145,000 repairs. For more information about this Index, including methodology and archived data visit http://corp.carmd.com. For information on CarMD's products and third-party software service solutions, visit www.carmd.com.

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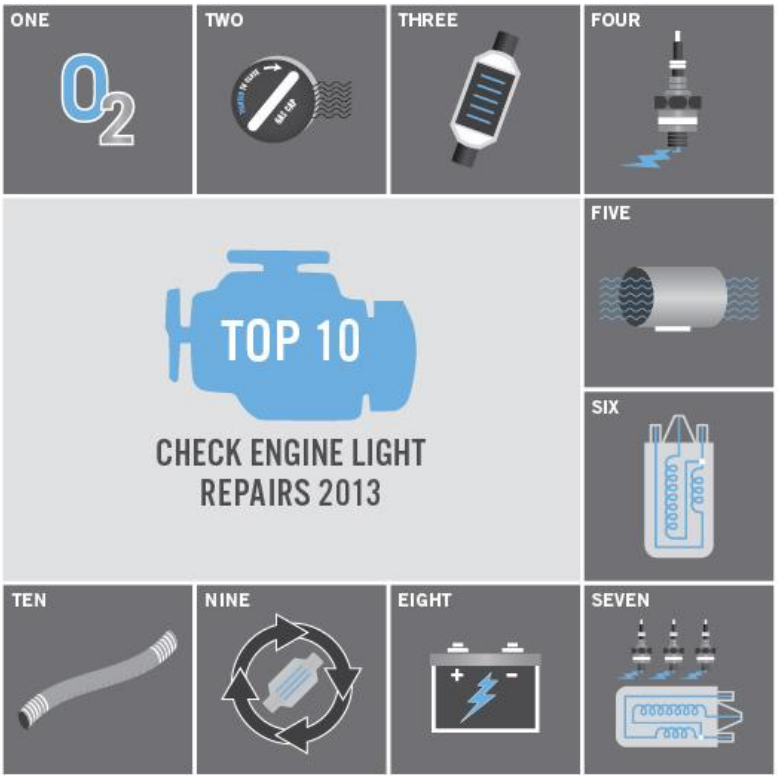
THE TOP TEN

CHECK ENGINE LIGHT REPAIRS



1 Replace O2 Sensor
$261.61 AVG repair
7.55% of CEL repairs

2 Inspect Gas Cap
11¢ AVG repair
7.17% of CEL repairs

3 Replace Catalytic Converter
$1,154.23 AVG repair
6.10% of CEL repairs

4 Replace Spark Plug(s) and Wire(s)
$361.95 AVG repair
3.35% of CEL repairs

5 Replace Mass Airflow Sensor
$423.61 AVG repair
3.35% of CEL repairs

6 Replace Ignition Coil(s)
$250.94 AVG repair
3.00% of CEL repairs

7 Replace Ignition Coil(s) and Spark Plug(s)
$420.34 AVG repair
2.89% of CEL repairs

8 Inspect/Replace Battery/Charging System
$110.82 AVG repair
2.54% of CEL repairs

9 Replace EGR Valve and Clean EGR Ports
$351.97 AVG repair
2.32% of CEL repairs

10 Inspect/Replace Vacuum Hose(s)
$122.52 AVG repair
2.22% of CEL repairs

2014 CarMD® VEHICLE HEALTH INDEX™

(Source: CarMD.com Corp.)