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## **Annual CarMD State-by-State Ranking of Car Repair Costs Finds Drivers in North Carolina Paid Most, Nebraska Paid Least for Check Engine Repairs in 2013**

### ***Five most expensive states along Eastern Seaboard***

**IRVINE, Calif. (June 18, 2014)** – When the check engine light illuminates on the dashboard, drivers along the Eastern Seaboard now pay the most for related car repairs, according to CarMD’s analysis of more than 145,000 vehicles needing check engine repairs in 2013. Drivers in North Carolina, which is home to the most visited Great Smoky Mountains National Park, paid the most in the nation to have the check engine light diagnosed and repaired, at an average cost of \$426.45. From 2012 to 2013, drivers in North Carolina saw a 9.37 percent jump in repair costs, including a 4.76 percent increase in parts and 17.53 percent increase in labor costs. Rounding out the five most expensive states are: Massachusetts (no. 2), Delaware (no. 3), New Jersey (no. 4) and Virginia (no. 5).

Vehicle owners paid the least for auto repairs in Nebraska at an average cost of \$323.57 for parts and labor. California (no. 6) dropped out of the top five for the first time since CarMD has tracked repair costs; and New Mexico ranked no. 47, marking the first time a state from the West ranked among the five least expensive. The other most affordable states in which to get your car repaired are New Hampshire (no. 50); West Virginia (no. 49); and Michigan (no. 48). The least expensive states have several commonalities, including lower parts costs, and a lower percentage of pricey and catastrophic repairs such as anti-lock brake system, catalytic converter and transmission replacements demonstrating drivers in these states tend to take better care of their cars, address problems quickly, and may also be driving newer vehicles. The complete ranking is available at [www.carmd.com](http://www.carmd.com).

“While we are not able to control weather, gas prices and hard goods costs like car parts, as consumers we can minimize overall car ownership costs with preventative maintenance and swift attention to dashboard warnings like the check engine light,” says Doug Sobieski, chief marketing officer, CarMD.com Corp. “As drivers plan their summer road trips and year-round vehicle maintenance, we encourage them to make car maintenance and repairs a top priority to reduce costs and maximize safety, regardless of where they reside or travel.”

CarMD’s ranking of the five states with the highest car repair costs in 2013:

State	Average Parts Cost	Average Labor Cost	Average Total Car Repair Cost in 2013 (Parts & Labor)
1. North Carolina	\$ 261.21	\$ 165.24	\$ 426.45
2. Massachusetts	\$ 273.16	\$ 151.39	\$ 424.55
3. Delaware	\$ 266.58	\$ 157.33	\$ 423.91
4. New Jersey	\$ 267.71	\$ 154.19	\$ 421.90
5. Virginia	\$ 263.20	\$ 158.29	\$ 421.49

CarMD ranking of the five states with the lowest car repair costs in 2013:

State	Average Parts Cost	Average Labor Cost	Average Total Car Repair Cost in 2013 (Parts & Labor)
47. New Mexico	\$ 196.13	\$ 155.73	\$ 351.86
48. Michigan	\$ 188.53	\$ 151.10	\$ 339.63
49. West Virginia	\$ 186.93	\$ 152.57	\$ 339.50
50. New Hampshire	\$ 193.32	\$ 143.53	\$ 336.85
51. Nebraska	\$ 163.24	\$ 160.33	\$ 323.57

## CarMD State-by-State Ranking of Car Repair Costs – 2-2-2

### Other key findings:

- **U.S. Average:** The average cost for check engine light-related repairs in the U.S. in 2013 was \$392.49, up 6.7 percent from \$367.84 in 2012. The state closest to the U.S. average is North Dakota at \$392.71, which is just pennies from the national mean.
- **Up in Rank:** Vermont moved from the state with the lowest repair costs to the no. 16 ranking, up 47.89 percent from \$269.72 to \$398.90. Vermont drivers had an increase in pricey catalytic converter replacements and a drop in visits to the repair shop because of pesky, yet low cost gas cap troubles. Delaware moved from the five least to the five most expensive states with a 35.16 percent increase in average repair cost due in large part to a 45 percent increase in parts costs from increased volume of ABS and transmission replacements, among other repairs with more expensive parts.
- **Down in Rank:** Oregon dropped from the no. 10 to no. 35 most expensive state for car repairs with a 1.3 percent decrease in average repair costs bucking the national trend and joining Nebraska as the only two states that did not experience an increase in repair costs this past year. New Mexico, which moved down from no. 35 to no. 47 in rank with only a slight 2.06 percent increase in average repair costs, is another example of how higher repair costs are shifting from west to east.
- **Labor and Parts Costs:** South Dakota car owners paid the most (\$183.46), while New Hampshire drivers paid the least (\$143.53) in labor charges on average. Massachusetts paid the most for parts (\$273.16), driven by a high percentage of transmission and hybrid-related parts replacements. Nebraska paid the least (\$163.24) on average for check engine-related repair parts.
- **Putting off Repairs has Impact:** Some factors that contribute to repair costs include age and type of vehicle, repair type and difficulty, parts costs and labor rates. The most common check engine light repair is the replacement of a faulty oxygen sensor, which can negatively impact fuel economy by as much as 40 percent if ignored. In North Carolina, O2 sensors account for 7.83 percent of repairs at an average cost of \$262 including \$146 parts and \$116 labor. In Nebraska, the O2 sensor accounts for 10.28 percent of repairs at an average cost of \$235 for parts with \$121 in parts and \$114 in labor. A fairly pricey repair is the replacement of the catalytic converter, which tends to fail when another part such as an O2 sensor or spark plug is ignored for too long. In Nebraska, catalytic converter replacements rank seventh accounting for only 2.94 percent of repairs. Conversely, in more expensive North Carolina the catalytic converter ranks second with 7.47 percent of repairs at an average cost of \$1,192.46.
- **Hybrid Repair Costs:** Although car repair costs are up across most of the country, hybrid repair costs continue to trend down as the volume of hybrid vehicles and people trained to service them rise. The most affordable state for hybrid battery replacement repairs is Missouri at an average cost of \$2,386.66 to replace a hybrid battery. The most expensive state in which to have a hybrid car battery in 2013 was Nevada at \$3,977.05 on average.

CarMD's state-by-state ranking of repair costs was derived from analysis of 145,410 repairs for model year 1996 to 2013 vehicles from Jan. 1, 2013 through Dec. 31, 2013 by CarMD's nationwide network of Automotive Service Excellence (ASE)-certified technicians. All 51 U.S. states/districts, including the District of Columbia, are represented in this Index. The repairs are related to a vehicle's check engine system, which is standard on all vehicles manufactured since 1996. The on-board diagnostic (OBD2) system monitors approximately 80 percent of systems on these vehicles, triggering the check engine light when a problem occurs. The CarMD Vehicle Health Index database and average repair cost findings do not include problems that are outside the scope of a vehicle's OBD2 computer monitoring such as tires, and mechanical parts like belts and hoses.

### **About CarMD**

Based in Irvine, Calif., CarMD is a leading-edge Software as a Service (SaaS) solutions provider with products and applications that leverage and empower the capabilities of the on-board diagnostics (OBD2) port. 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 and products like the award winning CarMD® Vehicle Health System™. 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 and products, visit [www.carmd.com](http://www.carmd.com).

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(Below is a complete ranking of U.S. states/districts in order of most to least expensive car repair costs in 2013.)

## State-by-State Ranking of Average Check Engine Light Car Repair Costs – 2013

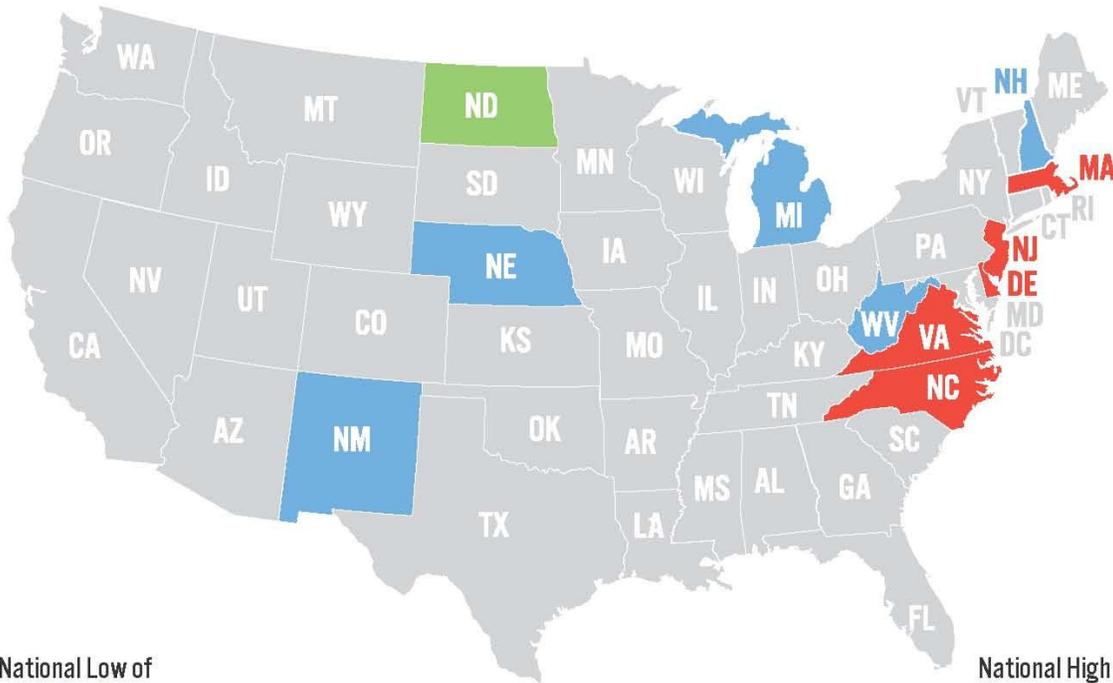
(Source: CarMD.com Corp., CarMD® Vehicle Health Index™)

Ranking	State	Avg. Parts Cost	Avg. Labor Charge	Average Car Repair Cost (Parts & Labor)	Avg. Repair Cost % up/down from 2012	Change in Rank from 2012
1	North Carolina	\$ 261.21	\$ 165.24	\$ 426.45	Up 9.37%	Up from no. 4
2	Massachusetts	\$ 273.16	\$ 151.39	\$ 424.55	Up 18.46%	Up from no. 25
3	Delaware	\$ 266.58	\$ 157.33	\$ 423.91	Up 35.16%	Up from no. 48
4	New Jersey	\$ 267.71	\$ 154.19	\$ 421.90	Up 7.35%	Down from no. 1
5	Virginia	\$ 263.20	\$ 158.29	\$ 421.49	Up 10.28%	Up from no. 9
6	California	\$ 259.15	\$ 159.29	\$ 418.44	Up 7.19%	Down from no. 3
7	Georgia	\$ 257.39	\$ 160.84	\$ 418.23	Up 8.54%	Down from no. 6
8	Utah	\$ 249.91	\$ 163.00	\$ 412.91	Up 11.41%	Up from no. 14
9	District of Columbia	\$ 257.67	\$ 153.98	\$ 411.65	Up 5.11%	Down from no. 2
10	Rhode Island	\$ 262.02	\$ 149.52	\$ 411.54	Up 10.83%	Up from no. 13
11	Connecticut	\$ 249.50	\$ 157.75	\$ 407.25	Up 5.75%	Down from no. 7
12	Kentucky	\$ 247.56	\$ 157.73	\$ 405.29	Up 10.48%	Up from no. 17
13	New York	\$ 251.20	\$ 152.41	\$ 403.61	UP 10.27%	Up from 18
14	Wyoming	\$ 224.96	\$ 174.71	\$ 399.67	Up 23.23%	Up from no. 45
15	Nevada	\$ 243.01	\$ 156.43	\$ 399.44	Up 9.66%	Up from no. 20
16	Vermont	\$ 250.69	\$ 148.21	\$ 398.90	Up 47.89%	Up from no. 51
17	Maryland	\$ 243.90	\$ 154.68	\$ 398.58	Up 2.78%	Down from no. 5
18	Florida	\$ 239.93	\$ 154.98	\$ 394.91	Up 4.62%	Down from no. 11
19	Colorado	\$ 230.62	\$ 164.24	\$ 394.86	Up 2.63%	Down from no. 8
20	Illinois	\$ 239.14	\$ 154.18	\$ 393.32	Up 14.63%	Up from no. 37
21	North Dakota	\$ 218.57	\$ 174.14	\$ 392.71	Up 14.12%	Up from no. 36
	U.S. Average	\$ 235.26	\$ 157.23	\$ 392.49	Up 6.70%	
22	Texas	\$ 232.70	\$ 157.97	\$ 390.67	Up 7.23%	Down from no. 19
23	Hawaii	\$ 239.00	\$ 150.03	\$ 389.03	Up 5.04%	Down from no. 15
24	Montana	\$ 225.32	\$ 162.86	\$ 388.18	Up 7.88%	No change
25	South Carolina	\$ 223.93	\$ 164.18	\$ 388.11	Up 5.57%	Down from no. 16
26	Louisiana	\$ 224.20	\$ 162.60	\$ 386.80	Up 9.28%	Up from no. 27
27	Arkansas	\$ 223.26	\$ 160.01	\$ 383.27	Up 6.04%	Down from no. 23
28	Washington	\$ 225.76	\$ 156.64	\$ 382.40	Up 1.89%	Down from no. 12
29	Pennsylvania	\$ 228.04	\$ 154.21	\$ 382.25	Up 5.12%	Down from no. 21
30	Maine	\$ 223.95	\$ 158.05	\$ 382.00	Up 16.43%	Up from no. 43
31	Indiana	\$ 225.28	\$ 156.30	\$ 381.58	Up 15.87%	Up from no. 40
32	Idaho	\$ 220.53	\$ 160.74	\$ 381.27	Up 9.32%	No change
33	South Dakota	\$ 196.89	\$ 183.46	\$ 380.35	Up 21.95%	Up from no. 49
34	Minnesota	\$ 225.54	\$ 152.20	\$ 377.74	Up 9.07%	No change
35	Oregon	\$ 218.94	\$ 156.31	\$ 375.25	Down 1.30%	Down from no. 10
36	Arizona	\$ 218.14	\$ 155.39	\$ 373.53	Up 3.32%	Down from no. 22
37	Tennessee	\$ 214.52	\$ 158.74	\$ 373.26	Up 5.64%	Down from no. 28
38	Mississippi	\$ 211.54	\$ 161.45	\$ 372.99	Up 4.86%	Down from no. 26
39	Alaska	\$ 207.14	\$ 165.16	\$ 372.30	Up 9.33%	Down from no. 38
40	Missouri	\$ 211.09	\$ 159.49	\$ 370.58	Up 5.06%	Down from no. 29
41	Alabama	\$ 215.71	\$ 151.19	\$ 366.90	Up 4.22%	Down from no. 31
42	Oklahoma	\$ 208.76	\$ 157.16	\$ 365.92	Up 8.29%	Down from no. 39
43	Ohio	\$ 211.71	\$ 151.35	\$ 363.06	Up 10.62%	Down from no. 42
44	Wisconsin	\$ 205.28	\$ 155.93	\$ 361.21	Up 9.87%	Down From no. 41
45	Kansas	\$ 202.50	\$ 152.55	\$ 355.05	Up 0.78%	Down from no. 30
46	Iowa	\$ 189.27	\$ 165.77	\$ 355.04	Up 12.79%	Up from no. 47
47	New Mexico	\$ 155.73	\$ 196.13	\$ 351.86	Up 2.06%	Down from no. 35
48	Michigan	\$ 188.53	\$ 151.10	\$ 339.63	UP 7.04%	Down from no. 46
49	West Virginia	\$ 186.93	\$ 152.57	\$ 339.50	Up 9.34%	Down from no. 50
50	New Hampshire	\$ 193.32	\$ 143.53	\$ 336.85	Up 2.69%	Down from no. 44
51	Nebraska	\$ 163.24	\$ 160.33	\$ 323.57	Down 1.00%	Down from no. 33

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# CarMD<sup>®</sup> VEHICLE HEALTH INDEX<sup>™</sup>

## STATE CHECK ENGINE-RELATED COSTS



National Low of  
**\$323.57**  
 Average Repair

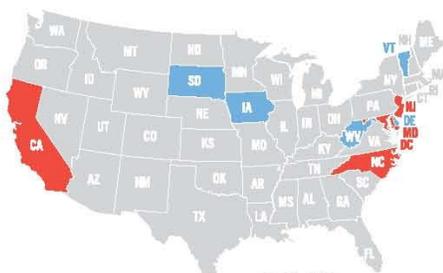
National High of  
**\$426.45**  
 Average Repair



**Lowest**  
 REPAIR COST

**Average**  
 REPAIR COST

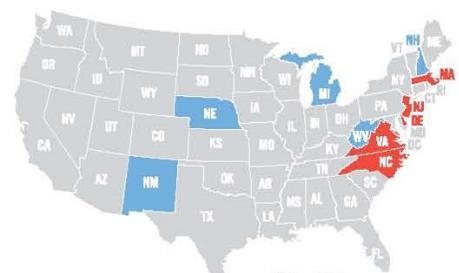
**Highest**  
 REPAIR COST



2012

### 2012/2013 COMPARISON

THE FIVE MOST EXPENSIVE  
 states for car repair are now  
 along the East Coast.



2013