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CarMD Finds Vehicle Owners in California Paid Most, Ohio Paid Least for Check Engine Light-Related Car Repairs in 2020

Hawaii and Nevada – States Heavily Impacted by COVID-19 Economic Woes – Among States with Most Dramatic Drop in Index Ranking

IRVINE, Calif. (July 13, 2021) – CarMD.com Corporation today released its annual state ranking of check engine light-related car repair costs, which finds vehicle owners in California paid the most (\$411) and Ohio the least (\$342) to have it fixed during calendar year 2020. Americans logged fewer miles and needed fewer car repairs in 2020 as pandemic-related shutdowns and essential travel guidance gripped most of the country. Hawaii and Nevada, which were among the state economies hardest hit by coronavirus, saw the most dramatic drop in CarMD's state ranking with Hawaii moving down 39 spots and Nevada dropping 25 spots.

Rounding out the five most affordable states for car repair after Ohio this past year were Maine, Wisconsin, Michigan and Indiana. After California, Connecticut, Colorado, District of Columbia and Utah were the states/districts needing the most expensive car repairs. CarMD analyzed data from more than 13.9 million cars, trucks, vans and SUVs whose drivers sought guidance for a check engine light problem in 2020. This was down nearly 13% from the 15.9 million check engine light issues analyzed by CarMD the previous year.

"Several factors contribute to a state's average repair costs, including vehicle age and type, how difficult the repair is, required parts, how much time is needed to make the repair and what the repair shop charges per hour," said David Rich, technical director, CarMD. "It makes sense that as people commuted less and took fewer road trips, there was less wear and tear on vehicles and fewer check engine light occurrences. As people get back on the road, now is a great time to catch up on vehicle inspections and car maintenance, which can reduce the likelihood of unexpected and costly car repairs." CarMD Garage is a free online resource that drivers can use to check for upcoming maintenance, technical service bulletins and common check engine problems by year, make, model and mileage.

CarMD's ranking of the five states/districts with the highest car repair costs in 2020:

- 1. California, \$410.73
- 2. Connecticut, \$406.49
- 3. Colorado, \$403.03
- 4. District of Columbia, \$400.68
- 5. Utah, \$395.86

CarMD's ranking of the five states/districts with the lowest car repair costs in 2020:

- 47. Indiana, \$352.20
- 48. Michigan, \$347.82
- 49. Wisconsin, \$344.45
- 50. Maine, \$342.12
- 51. Ohio, \$341.83

Key findings:

Labor Costs: For the fifth consecutive year, Vermont had the lowest average labor cost (\$125.95). This is not surprising since the most common cause of a check engine light on Vermont cars and trucks remains a loose or missing gas cap, accounting for 7.5% of repairs in Vermont. For the third year in a row, drivers in Mississippi paid the most on average for labor (\$152.63), where the most common repair was to replace ignition coils and spark plugs. The type of repair, how long the repair will take, and whether you opt to do it yourself or have it repaired by a professional automotive technician, all factor into average labor costs for a car repair.

Parts Costs: In 2020, drivers in Connecticut paid the most on average for parts (\$268.70), while drivers in Michigan, home to "Motor City," paid the least for parts (\$202.16). The most frequently recommended repair in Connecticut was to replace the catalytic converter. Catalytic converters are costly parts that contain precious metals; they do not typically fail unless maintenance and other repairs like as a faulty oxygen sensor or ignition coil are ignored, or a vehicle has high mileage. The most common repair in Michigan last year was to replace an oxygen sensor. The type of vehicle, type of repair and whether original equipment (OE) parts are used factor into average parts cost.

COVID Economy Impact: Several reports, including a <u>Wallethub ranking</u> and U.S. Bureau of Labor Statistics Jobs Reports, listed Hawaii and Nevada among the states hardest hit by Coronavirus shutdowns. CarMD ascertains that reduced mileage and commutes, fewer rideshare trips, competition among auto repair shops, and more time at home for DIY repairs – particularly in states hardest hit by shutdowns – impacted repair costs and rankings. Hawaii moved from no. 6 to no. 45, dropping from an average repair cost of \$402.91 in 2019 to \$356.54 in 2020. Nevada dropped from no. 15 to no. 40 with its average car repair cost dipping from \$395.89 in 2019 to \$364.59 last year.

CarMD.com Corporation publishes this annual state-by-state ranking as part of its CarMD® Vehicle Health Index™ to bring awareness about the importance of check engine light health in order to reduce cost of ownership. CarMD's state ranking of repair costs was derived from analysis of 13,944,931 repairs identified for model year 1996 to 2021 vehicles from Jan. 1, 2020 through Dec. 31, 2020 reported to and analyzed by CarMD's nationwide team of 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 on-board diagnostic (OBD2) system, which is standard on all vehicles manufactured since 1996. It monitors emissions-related systems within a vehicle, triggering the check engine light when a problem occurs. CarMD does not report on problems that are outside the scope of a vehicle's OBD2 computer monitoring such as tires, and mechanical parts like belts and hoses.

To view the 2021 CarMD state ranking of car repair costs for data collected in calendar year 2020, visit https://www.carmd.com/wp/vehicle-health-index-introduction/2021-carmd-state-index/.

About CarMD

Headquartered in Irvine, Calif., CarMD.com Corporation is a leading provider of automotive diagnostic business solutions, digital automotive aftermarket platform services and data licensing. CarMD specializes in automotive technology services that leverage and empower the capabilities of the on-board diagnostics (OBD2) port. CarMD has worked with a network of ASE-certified technicians to build and validate the most comprehensive database of OBD2-related expert repairs and associated costs from which CarMD draws its Vehicle Health Index™. This Index is released each summer to provide vehicle owners and the industry with a state-by-state analysis of car repair trends and costs. For information on CarMD's products and third-party software service solutions, visit 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 2020)

State-by-State Ranking of Average Check Engine Light-Related Car Repairs – 2020 Source: CarMD.com Corp.					
Rank	State	Avg. Labor Cost	Avg. Parts Cost	Avg. Repair Cost (Parts & Labor)	Change in Rank from 2019
1	California	\$145.16	\$265.57	\$410.73	No Change
2	Connecticut	\$137.79	\$268.70	\$406.49	Up from no. 9
3	Colorado	\$149.43	\$254.20	\$403.03	Up from no. 8
4	District of Columbia	\$140.71	\$259.97	\$400.68	Down from no. 2
5	Utah	\$141.28	\$254.58	\$395.86	Up from no. 10
6	Georgia	\$145.72	\$249.33	\$395.05	Down from no. 3
7	New Jersey	\$138.09	\$251.14	\$389.23	Down from no. 4
8	Montana	\$150.48	\$238.23	\$388.71	Up from no. 24
9	Tennessee	\$147.43	\$240.70	\$388.13	Up from no. 12
10	Virginia	\$142.23	\$245.53	\$387.76	Down from no. 5
11	North Carolina	\$144.53	\$243.12	\$387.65	Down from no. 7
12	Alabama	\$149.25	\$237.92	\$387.17	Up from no. 13
13	Washington	\$143.00	\$242.35	\$385.35	Up from no. 19
14	Texas	\$146.64	\$238.69	\$385.33	Up from no. 18
15	Mississippi	\$152.63	\$231.45	\$384.08	Down from no. 14
16	Oregon	\$140.07	\$243.90	\$383.97	No Change
17	Maryland	\$139.75	\$243.28	\$383.03	Down from no. 11
18	New Mexico	\$146.36	\$234.57	\$380.93	Up from no. 31
19	South Carolina	\$146.37	\$234.00	\$380.37	Down from no. 17
20	Louisiana	\$149.87	\$230.15	\$380.02	Up from no. 21
21	Wyoming	\$149.03	\$230.74	\$379.77	Up from no. 28
22	Kentucky	\$148.15	\$229.88	\$378.03	Up from no. 23
23	Arizona	\$138.74	\$238.35	\$377.09	Up from no. 27
24	Florida	\$138.70	\$237.87	\$376.57	Down from no. 20
25	Delaware	\$141.71	\$233.99	\$375.70	Down from no. 22
26	Idaho	\$144.08	\$230.88	\$374.96	No Change
27	Massachusetts	\$132.85	\$239.92	\$372.77	Up from no. 30
28	Oklahoma	\$149.38	\$222.72	\$372.10	Up from no. 33
29	Pennsylvania	\$139.77	\$232.26	\$372.03	Up from no. 32
30	Rhode Island	\$131.36	\$239.97	\$371.33	Down from no. 25
31	Arkansas	\$149.57	\$221.46	\$371.03	Down from no. 29
32	West Virginia	\$144.54	\$226.10	\$370.64	Up from no. 34
33	South Dakota	\$148.61	\$221.85	\$370.46	Up from no. 35
34	Missouri	\$147.11	\$222.12	\$369.23	Up from no. 37
35	Nebraska	\$147.11	\$222.11	\$369.22	Up from no. 43
36	New York	\$134.42	\$234.60	\$369.02	No Change
37	Alaska	\$144.30	\$224.71	\$369.01	Up from no. 38
38	Illinois	\$141.26	\$224.24	\$365.50	Up from no. 39
39	Kansas	\$148.35	\$217.10	\$365.45	Up from no. 40
40	Nevada	\$149.69	\$214.90	\$364.59	Down from no. 15
41	North Dakota	\$149.23	\$213.94	\$363.17	Up from no. 45
42	Minnesota	\$144.87	\$217.77	\$362.64	Down from no. 41
43	New Hampshire	\$130.43	\$226.97	\$357.40	Down from no. 42
44	Vermont	\$125.95	\$230.60	\$356.55	Up from no. 51
45	Hawaii	\$127.59	\$228.95	\$356.54	Down from no. 6
46	lowa	\$146.73	\$205.97	\$352.70	Up from no. 47
47	Indiana	\$143.21	\$208.99	\$352.20	Down from no. 44
48	Michigan	\$145.66	\$202.16	\$347.82	No Change
49	Wisconsin	\$138.12	\$206.33	\$344.45	No Change
50	Maine	\$136.30	\$205.82	\$342.12	Down from no. 46
51	Ohio	\$136.00	\$205.83	\$341.83	Down from no. 50



2021 CarMD® Vehicle Health Index™

States with Highest / Lowest Average Check Engine Light-Related Car Repair Costs in 2020



