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For The Second Consecutive Year CarMD Finds Michigan Most Affordable State for Check Engine Repairs; Connecticut Drivers Paid Most for Parts and Labor in 2016

IRVINE, Calif. (July 18, 2017) – For the second consecutive year, Michigan is the U.S. state with the lowest average check engine light repair cost (\$343.40), according to [CarMD](#), which analyzed data from more than 11.5 million vehicles needing repairs in 2016. Connecticut had the highest average repair cost at \$411.45 for parts and labor to address the glowing dashboard light. After Connecticut, the most expensive states/districts for car repairs are District of Columbia, Rhode Island, Georgia and Maryland. Rounding out the five most affordable states for car repairs are Maine, Wisconsin, Hawaii and Ohio.

When vehicles have check engine light problems, the leading culprit is a faulty oxygen sensor (O2 sensor), which is the most frequently diagnosed repair in 35 states. The cost, including parts and labor, to have an oxygen sensor professionally installed can vary from \$233 in Michigan to \$296 in Vermont. Parts costs alone can also vary from state-to-state. The average O2 sensor part costs \$169 in Connecticut, which is nearly 34 percent more than the part cost in Michigan (\$126). Properly operating oxygen sensors are important to a car's performance and to the environment. If left unrepaired most check engine light-related problems, including a faulty O2 sensor, can negatively impact a car's fuel economy and cause damage to other car parts like the more costly catalytic converter, which averages \$1,190 to replace.

"As we track check engine light repair data, we have noticed a trend in which the states with the highest repair costs tend to have a higher frequency of expensive repairs that could have been avoided if vehicle owners were more diligent with scheduled maintenance and had repairs made shortly after the check engine light came on versus driving it in hopes it would go off," said David Rich, CarMD's technical director. "Many drivers ignore check engine light problems because it seems like their car is driving just fine or they don't like the initial quote, yet don't realize that ignoring it will almost always end up causing additional costs and repairs down the road."

A leading provider of automotive diagnostic information, CarMD 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 also offers [CarMD Garage Vehicle Health Reports](#) where vehicle owners can research upcoming maintenance items, identify predicted check engine light failures, and find related parts online.

CarMD's ranking of the five states/districts with the highest car repair costs in 2016:

State	Average Labor Cost	Average Parts Cost	Average Total Car Repair Cost in 2016 (Parts & Labor)
1. Connecticut	\$160.93	\$250.52	\$411.45
2. District of Columbia	\$164.62	\$246.36	\$410.98
3. Rhode Island	\$159.39	\$246.44	\$405.83
4. Georgia	\$168.56	\$227.81	\$396.37
5. Maryland	\$162.03	\$230.96	\$392.99

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

CarMD ranking of the five states/districts with the lowest car repair costs in 2016:

State	Average Labor Cost	Average Parts Cost	Average Total Car Repair Cost in 2016 (Parts & Labor)
47. Ohio	\$156.93	\$192.25	\$349.18
48. Hawaii	\$148.11	\$198.83	\$346.94
49. Wisconsin	\$155.56	\$191.25	\$346.81
50. Maine	\$152.24	\$191.36	\$343.60
51. Michigan	\$160.63	\$182.77	\$343.40

Key findings:

Labor and Parts Costs: Vermont vehicle owners paid the least for labor (\$141.13). Drivers in Mississippi paid the most for labor (\$174.61) on average. Michigan drivers paid the least for parts (\$182.77) while parts costs were highest in Connecticut (\$250.52). Factors that contribute to average parts and labor costs include vehicle type, make and age; type of repair needed; parts availability; difficulty of repair and hourly labor rates.

Repair Costs Vary by State: The same repair can vary in cost from state to state. To replace a car's mass air flow sensor – a common check engine light-related repair – the average cost is \$327 in Hawaii, while the same repair costs \$393 on average in Montana. To replace a throttle body assembly, it costs on average \$521 in Michigan, but it will run you as much as \$735 in North Dakota.

CarMD's state ranking of repair costs was derived from analysis of 11,541,253 repairs identified for model year 1996 to 2016 vehicles from Jan. 1, 2016 through Dec. 31, 2016 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.

About CarMD

Based in Irvine, Calif., CarMD is a leading provider of automotive diagnostic information, [products](#) and services 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 current database of OBD2-related expert repairs and associated costs from which CarMD draws its [Vehicle Health Index™](#) reports. 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 2016.)

State-by-State Ranking of Average Check Engine Light-Related Car Repairs – 2016

Source: CarMD.com Corp.

Rank	State	Avg. Labor Cost	Avg. Parts Cost	Avg. Repair Cost (Parts & Labor)	Change in Rank from 2015
1	Connecticut	\$160.93	\$250.52	\$411.45	up from no. 7
2	District of Columbia	\$164.62	\$246.36	\$410.98	up from no. 10
3	Rhode Island	\$159.39	\$246.44	\$405.83	up from no. 6
4	Georgia	\$168.56	\$227.81	\$396.37	up from no. 11
5	Maryland	\$162.03	\$230.96	\$392.99	down from no. 3
6	Montana	\$167.90	\$220.41	\$388.31	up from no. 9
7	Utah	\$164.16	\$223.79	\$387.95	up from no. 14
8	Delaware	\$164.38	\$223.36	\$387.74	up from no. 22
9	Colorado	\$169.20	\$218.04	\$387.24	down from no. 8
10	Tennessee	\$168.67	\$217.23	\$385.90	up from no. 34
11	Alabama	\$171.23	\$212.39	\$383.62	up from no. 36
12	New Jersey	\$160.36	\$223.14	\$383.50	down from no. 5
13	Mississippi	\$174.61	\$207.40	\$382.01	up from no. 24
14	North Carolina	\$163.03	\$218.29	\$381.32	up from no. 23
15	Nevada	\$162.63	\$218.30	\$380.93	up from no. 21
16	Idaho	\$168.30	\$212.01	\$380.31	down from no. 13
17	Kentucky	\$165.70	\$213.01	\$378.71	up from no. 27
18	Alaska	\$169.45	\$209.04	\$378.49	down from no. 16
19	Arizona	\$163.89	\$213.87	\$377.76	up from no. 33
20	Washington	\$161.43	\$215.06	\$376.49	down from no. 15
21	Virginia	\$160.90	\$215.55	\$376.45	down from no. 12
22	Florida	\$162.44	\$213.95	\$376.39	up from no. 31
23	Massachusetts	\$156.91	\$218.64	\$375.55	down from no. 20
24	Oregon	\$159.69	\$214.79	\$374.48	down from no. 18
25	Louisiana	\$166.15	\$207.97	\$374.12	up from no. 38
26	South Carolina	\$164.31	\$209.77	\$374.08	up from no. 29
27	Arkansas	\$167.04	\$206.66	\$373.70	down from no. 26
28	New Mexico	\$162.98	\$210.15	\$373.14	down from no. 17
29	West Virginia	\$160.88	\$212.06	\$372.94	up from no. 39
30	Pennsylvania	\$160.78	\$212.16	\$372.94	up from no. 37
31	Missouri	\$164.99	\$204.32	\$369.31	up from no. 44
32	Oklahoma	\$168.76	\$200.05	\$368.81	up from no. 43
33	New York	\$157.51	\$211.18	\$368.69	down from no. 30
34	Texas	\$162.45	\$205.39	\$367.84	down from no. 32
35	Illinois	\$159.65	\$206.57	\$366.22	up from no. 41
36	New Hampshire	\$156.09	\$210.05	\$366.14	down from no. 28
37	California	\$158.74	\$206.71	\$365.45	down from no. 1
38	Iowa	\$159.63	\$205.56	\$365.19	up from no. 47
39	Kansas	\$160.98	\$203.34	\$364.32	up from no. 45
40	Nebraska	\$165.61	\$198.67	\$364.28	down from no. 40
41	Minnesota	\$160.41	\$202.71	\$363.12	down from no. 35
42	Wyoming	\$170.69	\$190.74	\$361.43	down from no. 2
43	Indiana	\$161.39	\$198.72	\$360.11	up from no. 50
44	South Dakota	\$166.99	\$192.82	\$359.81	down from no. 42
45	Vermont	\$141.13	\$218.58	\$359.71	down from no. 25
46	North Dakota	\$159.41	\$195.09	\$354.50	down from no. 4
47	Ohio	\$156.93	\$192.25	\$349.18	up from no. 49
48	Hawaii	\$148.11	\$198.83	\$346.94	down from no. 19
49	Wisconsin	\$155.56	\$191.25	\$346.81	down from no. 48
50	Maine	\$152.24	\$191.36	\$343.60	down from no. 46
51	Michigan	\$160.63	\$182.77	\$343.40	No change

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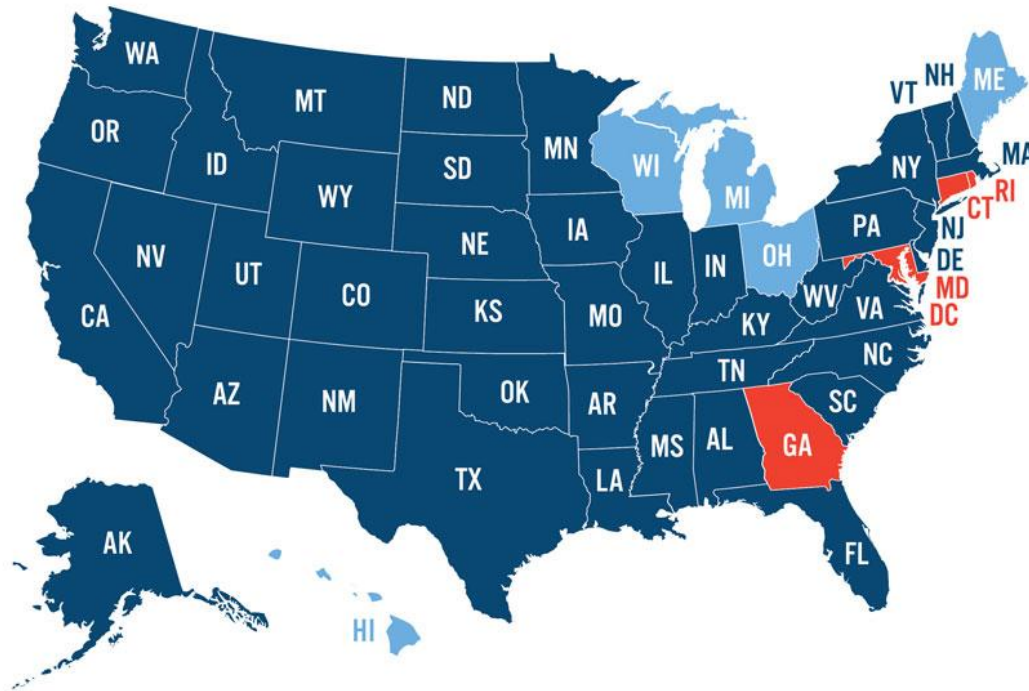
STATES WITH HIGHEST/LOWEST CHECK ENGINE LIGHT-RELATED CAR REPAIR COSTS IN 2016



LOWEST AVERAGE REPAIR COSTS



HIGHEST AVERAGE REPAIR COSTS



\$343

DRIVERS PAID
THE LEAST ON AVERAGE IN
MICHIGAN
FOR CHECK ENGINE CAR
REPAIRS IN 2016.



\$411

DRIVERS PAID
THE MOST ON AVERAGE IN
CONNECTICUT
FOR CHECK ENGINE CAR
REPAIRS IN 2016.



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