

**CALIFORNIA**  
**AIR RESOURCES BOARD**

Mary D. Nichols, Chair  
Matthew Rodriguez, CalEPA Secretary  
Edmund G. Brown Jr., Governor

April 24, 2018

**MANUFACTURERS ADVISORY CORRESPONDENCE (MAC) 2018-01**

**TO: ALL MANUFACTURERS OF  
PASSENGER CARS (PC)  
LIGHT-DUTY TRUCKS (LDT)  
MEDIUM-DUTY VEHICLES AND ENGINES USED IN SUCH  
VEHICLES (MDV/E)  
OFF-ROAD LARGE SPARK-IGNITION ENGINES (LSIE)  
OFF-HIGHWAY RECREATIONAL VEHICLES (OHRV)  
ALTERNATIVE FUEL RETROFIT (AFR) SYSTEMS FOR ON-ROAD  
VEHICLES AND ENGINES (ONR VEHICLE/ENGINE) INCLUDING  
PC, LDT, MDV/E, AND HEAVY-DUTY ENGINES AND VEHICLES  
EQUIPPED WITH THESE ENGINES (HDEN)  
ALL OTHER INTERESTED PARTIES**

**SUBJECT: Cost Limit for High-Priced Warranted Parts for New 2019 Model-Year (MY) Passenger Cars (PC), Light-Duty Trucks (LDT), Medium-Duty Vehicles and Engines Used in These Vehicles (MDV/E), Off-Road Large Spark-Ignition Engines (LSIE), Off-Highway Recreational Vehicles (OHRV), and Alternative Fuel Retrofit (AFR) Systems Certified During Calendar Years (CY) 2018 and 2019 for Installation on In-Use MY 1994 and Subsequent On-Road Vehicles and Engines (ONR Vehicle/Engine) Including PC, LDT, MDV/E and Heavy-Duty Engines and Vehicles Equipped with These Engines (HDEN)**

This letter provides a Manufacturers Advisory Correspondence (MAC) that identifies the cost limit for high-priced warranted parts of new MY 2019 PC, LDT, MDV/MDE, LSIE, and OHRV, and AFR systems certified during CY 2018 and CY 2019 for installation on in-use MY 1994 and subsequent ONR Vehicles/Engines. Also included is identification of the highest-cost metropolitan area of California for the purpose of calculating labor cost when determining the total replacement cost of a warranted part.

Tables 1, 2, and 3 at the end of this MAC are a summary of these cost limits for new MY 2019 PC, LDT, MDV/E, LSIE, and OHRV, and AFR systems for in-use MY 1994 and subsequent PC, LDT, MDV/E, and HDV/E.

If you have any questions regarding LSIE warranty matters, please contact Mr. Byron Ng, Air Pollution Specialist, Off-Road Spark-Ignited Engine Certification Section, at (626) 459-4312 or by e-mail at [Byron.Ng@arb.ca.gov](mailto:Byron.Ng@arb.ca.gov). For questions regarding warranty matters for MDE and for MY 2004+ AFR systems for HDENV and MDE (and MDV into which such MDE is installed), please contact Mr. Mel Capistrano, Air Resources Engineer, Compression-Ignition and Heavy-Duty Certification Section, at

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(626) 350-6568 or by e-mail at Mel. Capistrano@arb.ca.gov. For questions regarding parts that upon failure must illuminate the MIL and be covered by the emissions warranty, please contact Mr. John Ellis, Manager, Gasoline On-Board Diagnostics Section, at (626) 350-6516 or by e-mail at John. Ellis@arb.ca.gov, or Mr. Tom Montes, Manager, Diesel On-Board Diagnostics Section, at (626) 575-6777 or by e-mail at Thomas.Montes@arb.ca.gov. For all other matters in this MAC, please contact Mr. Steven Hada, Air Resources Engineer, On-Road Light-Duty Certification Section, at (626) 575-6641 or by e-mail at Steven. Hada@arb.ca.gov.

Sincerely,

**analien Beran for**

Annette Hebert, Chief  
Emissions Compliance, Automotive Regulations and Science Division

State of California  
CALIFORNIA AIR RESOURCES BOARD

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- SUBJECT:** Cost Limit for High-Priced Warranted Parts for New 2019 Model-Year (MY) Passenger Cars (PC), Light-Duty Trucks (LDT), Medium-Duty Vehicles and Engines Used in These Vehicles (MDV/E), Off-Road Large Spark-Ignition Engines (LSIE), Off-Highway Recreational Vehicles (OHRV), and Alternative Fuel Retrofit (AFR) Systems Certified During Calendar Years (CY) 2018 and 2019 for Installation on In-Use MY 1994 and Subsequent On-Road Vehicles and Engines (ONR Vehicle/Engine) Including PC, LDT, MDV/E and Heavy-Duty Engines and Vehicles Equipped with These Engines (HDE/V)
- APPLICABILITY:**
- New MY 2019 PC, LDT, MDV/E, LSIE, and OHRV
  - AFR Systems Certified During CY 2018 and CY 2019 for Installation on In-Use MY 1994 and Subsequent PC, LDT, MDV/E, and HDV/E
- REFERENCES:**
1. California Health and Safety Code Section 43205 [HSC §43205]
  2. Emission Control System Warranty Regulations [Title 13, California Code of Regulations, Sections 2035 et seq. (13 CCR §2035 et seq.)]
  3. Zero-Emission Vehicle Standards for 2018 and Subsequent Model Year Passenger Cars, Light-Duty Trucks and Medium-Duty Vehicles [13 CCR§1962.2(c)]
  4. Defects Warranty for 2001 and Later Off-Road Large Spark-Ignition Engines [13 CCR §2435]
  5. Defects Warranty Requirements for Evaporative Emission Control Systems of 2018 and Later Model Year Off-Highway Recreational Vehicles [13 CCR §2419.1 et seq.]
  6. “California Certification And Installation Procedures For Alternative Fuel Retrofit Systems For 1994 Through 2003 Model Years And For 1994 Through 2003 Model Year Motor Vehicle Retrofit Systems Certified For Emission Reduction

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Credit”, as last amended August 8, 2014, (1994-2003 AFR System Certification and Installation Procedures) incorporated by reference in 13 CCR §2030 and §2031.

7. “California Certification And Installation Procedures For Alternative Fuel Retrofit Systems For 2004 And Subsequent Model Year On-Road Motor Vehicles And Engines”, adopted August 8, 2014, (2004+ AFR System Certification and Installation Procedures) incorporated by reference in 13 CCR §2030 and §2031.
8. Manufacturers Advisory Correspondence 2017-03 available at this web link.

<https://www.arb.ca.gov/msprog/macs/mac1703/mac1703.pdf>

### POLICY:

1. Identification of the Highest-Cost Metropolitan Area of California for New MY 2019 PC, LDT, MDV/E, LSIE, and OHRV, and MY 1994 And Subsequent AFR Systems Certified During CY 2018 And CY 2019.

According to HSC §43205(b), and 13 CCR §2037(c), §2435(b), the 1994-2003 AFR System Certification Installation Procedures, or the 2004+ AFR System Certification and Installation Procedures, as applicable, the high-priced warranted parts list is based on a periodically revised cost limit as calculated for the highest-cost metropolitan area of California. For MY 2019, and CY 2018 and CY 2019 as applicable for AFR systems, the highest-cost metropolitan area of California is determined to be the San Jose-Sunnyvale-Santa Clara area.

The high-price warranty parts lists should reflect actual part costs to owners at the dealership that include dealer markup. The labor cost, as part of a manufacturer's determination of the total replacement cost of a warranted part, is to be based on the manufacturer's labor rate in the identified highest-cost metropolitan area or, if the manufacturer has no dealerships in this area, a comparable alternative area in California.

2. a. Cost Limit for High-Priced Warranted Parts for New MY 2019 PC, LDT, MDV/E and LSIE.

According to 13 CCR §2037(c) or §2435(b), as applicable, the cost limit for high-priced warranted parts for MY 2019 PC, LDT, MDV/E, and LSIE is calculated using the annual average nationwide urban Consumer Price Index

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(CPI) for 2017, i.e., the calendar year two years prior to the model-year for which the cost limit is being calculated. This CPI is published by the U.S. Bureau of Labor Statistics. Rounded to the nearest ten dollars, the MY 2019 cost limit is \$620, as calculated below:

$$\begin{aligned}\text{MY 2019 Cost Limit} &= \$300 \times (\text{calendar 2017 CPI/baseline CPI}) \\ &= \$300 \times (245.1/118.3) \\ &= \$620\end{aligned}$$

- b. Cost Limit for High-Priced Warranted Parts for New MY 2019 OHRV Certified to the New Vehicle-Based Evaporative Emission Standards in 13 CCR Section 2418.

According to 13 CCR §2419.1(c), the cost limit for high-priced warranted parts for MY 2019 OHRV evaporative emission control systems is calculated using the annual average nationwide urban CPI for 2017, i.e., the calendar year two years prior to the model-year for which the cost limit is being calculated. This CPI is published by the U.S. Bureau of Labor Statistics. Rounded to the nearest ten dollars, the MY 2019 cost limit is \$200, as calculated below:

$$\begin{aligned}\text{MY 2019 Cost Limit} &= \$200 \times (\text{calendar 2017 CPI/baseline CPI}) \\ &= \$200 \times (245.1/240.0) \\ &= \$200\end{aligned}$$

- c. Cost Limit for High-Priced Warranted Parts for AFR Systems Certified During CY 2018 and CY 2019 for Installation on In-Use MY 2004 and Subsequent ONR Vehicle/Engine (2004+ AFR Systems).

According to the 2004+ AFR System Certification and Installation Procedures, the cost limits for high-priced warranted parts for 2004+ AFR systems certified during CY 2018 and CY 2019 are calculated using the annual average nationwide urban CPI for 2016 and 2017, respectively, i.e., the calendar year two years prior to the calendar year for which the cost limit is being calculated. This CPI is published by the U.S. Bureau of Labor Statistics. Rounded to the nearest ten dollars, the CY 2018 and CY 2019 cost limits are \$610 and \$620, respectively, as calculated below:

$$\begin{aligned}\text{CY 2018 Cost Limit} &= \$300 \times (\text{calendar 2016 CPI/baseline CPI}) \\ &= \$300 \times (240.0/118.3) \\ &= \$610\end{aligned}$$

$$\begin{aligned}\text{CY 2019 Cost Limit} &= \$300 \times (\text{calendar 2017 CPI/baseline CPI}) \\ &= \$300 \times (245.1/118.3) \\ &= \$620\end{aligned}$$

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- d. Cost Limit for High-Priced Warranted Parts for AFR Systems Certified During CY 2018 and CY 2019 for Installation on In-Use MY 1994-2003 ONR Vehicle/Engine (1994-2003 AFR Systems).

According to the 1994-2003 AFR System Certification and Installation Procedures, the cost limits for high-priced warranted parts for 1994-2003 AFR systems certified during CY 2018 and CY 2019 are calculated using the annual average nationwide urban CPI for 2016 and 2017, i.e., the calendar year two years prior to the certification's calendar year for which the cost limit is being calculated. This CPI is published by the U.S. Bureau of Labor Statistics. Rounded to the nearest ten dollars, the CY 2018 and CY 2019 cost limits are \$590 and \$600, respectively, as calculated below:

$$\begin{aligned}\text{CY 2018 Cost Limit} &= \$300 \times (\text{calendar 2016 CPI/baseline CPI}) \\ &= \$300 \times (240.0/121.9) \\ &= \$590\end{aligned}$$

$$\begin{aligned}\text{CY 2019 Cost Limit} &= \$300 \times (\text{calendar 2017 CPI/baseline CPI}) \\ &= \$300 \times (245.1/121.9) \\ &= \$600\end{aligned}$$

3. Guidance on meeting the requirements for the items listed below may be found in MAC 17-03, available at this web link.

<https://www.arb.ca.gov/msprog/mac/mac1703/mac1703.pdf>

- The high-priced warranted parts must be documented in the manufacturer's certification application. For non-OHRV, parts up to \$100 below the cost limit must be listed. For OHRV, parts up to \$50 below the cost limit must be listed. Ref. MAC 17-03, section 3.
- For high-priced parts consistently above the cost limit, cost documentation may be waived. Ref. MAC 17-03, section 4.
- For a part that is integral to a larger assembly, the repair or replacement cost of the entire assembly may be cost determinant. Ref. MAC 17-03, section 5.
- A cost limit for MY 2020 and later vehicles and engines may be proposed by the manufacturer before a newer cost limit is determined by CARB. Ref. MAC 17-03, section 6.
- The cost limit listed in this MAC is not applicable to transitional zero-emission vehicles. Ref. MAC 17-03, section 7.
- The cost limit listed in this MAC is not applicable to vehicle that generate additional NMOG+NOx fleet average credits. Ref. MAC 17-03, section 8.

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- The cost limits for AFR systems are determined by the calendar year in which certification is granted. Ref. MAC 17-03, section 9.
- A malfunctioning part that illuminates the malfunction indicator light (MIL) must be identified as emissions related. Ref. MAC 17-03, section 10.

**TABLE 1**  
**Cost Limits For High-Priced Warranted Parts For New**  
**PC, LDT, MDV/E, and LSIE<sup>(3)</sup>**

Model Year <sup>(1)</sup>	Cost Limit
2014	\$580
2015	\$590
2016	\$600
2017	\$600
2018	\$610
<b>2019</b>	<b>\$620</b>

**TABLE 2**  
**Cost Limits For High-Priced Warranted Parts For New OHRV**

Model Year <sup>(1)</sup>	Cost Limit
<b>2018</b>	<b>\$200</b>
<b>2019</b>	<b>\$200</b>

**TABLE 3**  
**Cost Limits For High-Priced Warranted Parts For AFR Systems**

Calendar Year <sup>(2)</sup>	Cost Limit For 2004+	Cost Limit For 1994-2003
2014	\$580	\$560
2015	\$590	\$570
2016	\$600	\$580
2017	\$600	\$580
<b>2018</b>	<b>\$610</b>	<b>\$590</b>
<b>2019</b>	<b>\$620</b>	<b>\$600</b>

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- (1) Model Year means the model year of the test group/engine family, irrespective of the date the Executive Order is signed.
- (2) Calendar Year means the calendar year in which certification of the AFR system is granted, i.e., the date (during January 1 – December 31) the Executive Order is signed, irrespective of the model year of the base vehicle/engine.
- (3) The high-priced warranted parts cost limit does not apply to new HDE/V.