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28UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIARAUL SIQUEIROS, et al.,
Plaintiffs,
v.
GENERAL MOTORS LLC,
Defendant.Case No. [16-cv-07244-EMC](#)**ORDER GRANTING IN PART AND
DENYING IN PART THE PARTIES'
DAUBERT MOTIONS**

Docket Nos. 363, 365-366

I. INTRODUCTION

Plaintiffs allege that Defendant General Motors (“GM”) knowingly manufactured and sold a car engine with an inherent defect that caused excessive oil consumption and engine damage. The alleged defect affected 2011 to 2014 model-year GM vehicles. Plaintiffs assert claims under various state consumer-protection and fraud statutes on behalf of individuals as well as various statewide classes. Plaintiffs filed their class action complaint on December 19, 2016. *See* Docket No. 2 (“Compl.”). They have since amended their pleadings several times; the operative complaint is the seventh amended complaint. *See* Docket No. 286 (“7AC”).

Now pending are three motions to exclude expert opinions and testimony from the trial pursuant to standards articulated in Federal Rule of Evidence 702 and *Daubert v. Merrell Dow Pharm., Inc.*, 509 U.S. 579 (1993). GM moves to exclude the opinions of Plaintiffs’ experts Dr. Werner J.A. Dahm and Edward Stockton. Docket Nos. 363, 366. Plaintiffs move to exclude certain testimony by GM’s technical expert Robert Kuhn. Docket No. 365.

For the following reasons, the Court **GRANTS in part** and **DENIES in part** the motion to exclude the opinions of Dr. Dahm and Mr. Kuhn, and **DENIES** the motion to exclude the opinions

1 of Mr. Stockton.

2 **II. FACTUAL AND PROCEDURAL BACKGROUND**

3 A. Factual Background

4 Plaintiffs allege that GM’s Gen IV Vortec 5300 LC9 engine suffers from an “inherent” oil
5 consumption defect. 7AC ¶ 7. The “primary cause” of the alleged defect is the piston rings
6 installed by GM. *Id.* ¶ 8. These piston rings “do not maintain sufficient tension to keep oil in the
7 crankcase,” and the oil migration that occurs as a result allows oil to “burn[] or accumulate[] as
8 carbon buildup on the combustion chamber’s surfaces.” *Id.* ¶¶ 8–9.

9 Plaintiffs also allege that the Active Fuel Management (“AFM”) system in the Gen IV
10 engine “further contributes to the Oil Consumption Defect” because the AFM oil pressure relief
11 valve “spray[s] oil directly on the piston skirts,” overloading the piston rings. *Id.* ¶ 9. Finally,
12 Plaintiffs allege that the engine contains a “flawed PCV system that vacuums oil from the
13 valvetrain into the intake system.” *Id.* ¶ 10. Plaintiffs allege that GM “has long known of the Oil
14 Consumption Defect” but has failed to provide an adequate repair and has failed to disclose the
15 alleged defect to consumers. *Id.* ¶¶ 18-19.

16 Plaintiffs allege that the oil consumption defect causes safety problems in three ways: (1)
17 oil consumption can lead to a lack of adequate lubrication in the engine and dropping oil pressure
18 levels in vehicles, *see id.* ¶ 19; (2) the presence of excess oil in the combustion chamber can cause
19 spark plug fouling, which can cause engine problems, *see id.*; and (3) when drivers experience
20 these problems while driving, they may be forced to pull over and stop alongside a road or
21 highway (or they may be stranded in such a location with an inoperable vehicle), which places
22 them in danger, *see id.* ¶¶ 14, 120–21.

23 B. Procedural Background

24 At this point in the litigation, the claims of nine plaintiffs remain in the case, and are set for
25 trial in August 2022. The Court certified three of those claims for class action trials under Rule
26 23(b)(3): (1) breach of implied warranty under California’s Song-Beverly Consumer Warranty
27 Act; (2) breach of implied warranty under North Carolina law; and (3) violation of the Idaho
28 Consumer Protection Act. Docket No. 354 at 4. The certified classes are limited to current

1 owners and lessees of model year 2011-2014 Chevrolet Avalanche, Silverado, Suburban, Tahoe,
 2 and GMC Sierra, Yukon, and Yukon XL vehicles equipped with aluminum block LC9 Gen IV
 3 engines that were manufactured after February 10, 2011. The California class is further limited to
 4 current owners who purchased their vehicles in new condition and the Idaho class is further
 5 limited to current owners who purchased their vehicles from GM dealerships. *Id.* at 12-13.

6 The remaining individual claims are for (1) violation of the California Consumer Legal
 7 Remedies Act, (2) breach of the implied warranty under the Song Beverly Consumer Warranty
 8 Act, (3) violation of the California Unfair Competition Law, (4) violation of the North Carolina
 9 Unfair and Deceptive Trade Practices Act, (5) violation of the Texas Deceptive Trade Practices-
 10 Consumer Protection Act, (6) violation of the Massachusetts Regulation of Business Practices and
 11 Consumer Protection Act, (7) violation of the Tennessee Consumer Protection Act, (8) violation of
 12 the Idaho Consumer Protection Act, (9) violations of the Magnuson-Moss Warranty Act (only as
 13 to the California, Texas, Massachusetts, North Carolina, and Pennsylvania plaintiffs), (10) breach
 14 of the Massachusetts, North Carolina, Pennsylvania, and Texas implied warranties of
 15 merchantability, and (11) fraudulent omission under Massachusetts, North Carolina, Idaho, and
 16 Tennessee law. *Id.* at 2-4.

17 C. Summary of Relevant Expert Reports

18 1. Plaintiffs' Expert Dr. Ball

19 In support of their defect theory, Plaintiffs initially sought the expert opinion of Dr. Jeffrey
 20 K. Ball. Dr. Ball provided an initial report on September 16, 2019, in which he opined on the root
 21 cause of the oil consumption in the Gen IV engines of certain model year 2010-2014 GM vehicles
 22 and the cost to repair those vehicles. Docket No. 193-12 ("Initial Ball Report") at 18, 20-21. On
 23 November 21, 2019, Dr. Ball submitted a supplemental report in which he opined on the reliability
 24 of GM warranty data for model year 2010-2014 vehicles, and extrapolated from that data to
 25 produce warranty claim rates. Docket No. 193-42 ("Suppl. Ball Report"). Dr. Ball is not
 26 available to testify at trial because he passed away while this matter was pending.

27 2. Plaintiffs' Expert Dr. Dahm

28 Dr. Werner J.A. Dahm is the ASU Foundation Professor of Mechanical Engineering and

1 Aerospace Engineering at Arizona State University and Professor Emeritus of Engineering at the
2 University of Michigan. Docket No. 364-2 (“Dahm Report”) ¶ 1. He holds a Ph.D. from the
3 Division of Engineering and Applied Science at the California Institute of Technology, and
4 previously served as the Chief Scientist of the U.S. Air Force. *Id.* ¶¶ 8, 17. He has authored over
5 200 articles “on topics dealing with fluid dynamics, combustion, heat transfer, lubrication,
6 engines, propulsion systems, and related areas, and more broadly with mechanical and aerospace
7 engineering and their relation to defense science and engineering.” *Id.* ¶ 10. Dr. Dahm is a
8 member of the Society of Automotive Engineers, the American Society of Mechanical Engineers,
9 the American Institute of Aeronautics and Astronautics, and the American Physical Society. *Id.* ¶
10 9.

11 GM challenges Dr. Dahm’s qualifications as they relate to the issues in this litigation,
12 arguing that Dr. Dahm “is an aerospace engineer with no educational background or professional
13 experience in automotive engine design or automotive engineering.” Docket No. 363 (“Dahm
14 Motion”) at 14. Plaintiffs respond that the defect affecting the Class Vehicles concerns “the
15 mechanical engineering principles of fluid containment and component friction wear,” which are
16 well within Dr. Dahm’s subject matter expertise in “lubrication, heat transfer, fluid dynamics and
17 thermodynamic principles in internal combustion engine operation.” Docket No. 373 (“Dahm
18 Opp.”) at 7-8.

19 Dr. Dahm opines that “piston ring war is the root cause of the oil consumption defect” and
20 that “the Class Vehicles experience excessive piston ring wear due to an incorrect ‘piston ring
21 system’ design.” Dahm Report at 31-45. He explains that the defective piston ring system design
22 can result in a number of consequences to Class Vehicles, including “increased oil consumption,”
23 “engine misfiring,” “decreased engine power,” “increased internal part wear,” piston seizing” and
24 “engine seizing.” Dahm Report ¶ 64. The Dahm Report also includes discussions of about the
25 effectiveness of GM’s design changes, the adequacy of GM’s internal studies and warranty claims
26 data as they relate to the oil consumption defect, the adequacy of oil pressure instruments in Class
27 Vehicles, and potential safety risks posed by the oil consumption defect. Dr. Dahm opines that
28 because all Class Vehicles have the same “piston ring system” design, and because the errors in

1 the ring system are inherent in the design, all Class Vehicles experience the same defect, whether
2 or not owners have already experienced or reported any of the impacts of the defect. *Id.* ¶ 65.

3 GM objects to Dr. Dahm’s methodology, arguing that he did not perform any independent
4 research on engine design, piston ring design, or on oil consumption in automobiles, and did not
5 inspect or conduct testing of any of the Class Vehicle engines. Dahm Motion at 15. GM further
6 argues that Dr. Dahm fails to explain what exactly is incorrect about the piston ring assembly in
7 the Class Vehicles. *Id.* GM contends that there is no basis for Dr. Dahm’s opinion that all Class
8 Vehicles suffer from the same defect, noting that his own calculation is that only 3% of Class
9 Vehicles have needed a piston ring replacement. *Id.* at 16. Moreover, GM argues Dr. Dahm does
10 not provide a methodology or basis for his claims that the various alert systems in the Class
11 Vehicles have a distracting effect on drivers, placing them at risk of personal harm. *Id.* at 15.¹

12 Plaintiffs counter that Dr. Dahm’s methodology involved the application of “standard and
13 widely accepted principles and engineering methods relevant to fluid dynamics, combustion, heat
14 transfer, lubrication, piston and turbine driven engines” to the available evidence in this litigation.
15 Dahm Report ¶ 30; Exh. C – List of Relied Upon Documents. Dr. Dahm states that he has long
16 used this same method and application of principles throughout his career, including during his
17 work analyzing a “wide range of Air Force systems.” *Id.* ¶ 31. Plaintiffs refer to Dr. Dahm’s
18 extensive explanation, including a review of deposition testimony and GM’s productions, as the
19 basis for his opinion that a defect in the piston ring design is the root cause of the oil consumption
20 problem. *See* Dahm Report ¶¶ 92-133. And Plaintiffs entered a supplemental declaration to
21 clarify that Dr. Dahm has experience through his role as Chief Scientist for the U.S. Air Force in
22 investigating human interaction with instrument warning lights. *See* Docket No. 375 (“Dahm
23 Affidavit”) ¶¶ 13-19.

24 3. Plaintiffs’ Expert Stockton

25 Edward Stockton is the Vice President and Director of Economics Services of the Fontana

26 _____
27 ¹ GM also objects to Dr. Dahm’s Report to the extent that it endorses Dr. Ball’s opinions without
28 providing an independent basis, methodology or explanation for those opinions. *Id.* at 14 n. 25.
Nowhere in Dr. Dahm’s Report, however, does Dr. Dahm adopt Dr. Ball’s opinions without
stating that his independent analysis is consistent with Dr. Ball’s opinion.

1 Group, Inc. and has experience determining damages in vehicular defect cases and class action
2 litigation. Docket No. 367-3 (“Stockton Report”) ¶ 1. Stockton was asked by Plaintiffs’ counsel to
3 evaluate whether and to what extent class members have suffered economic damages and to
4 develop methods for quantifying and allocating those damages. *Id.* ¶ 7. To conduct the analysis,
5 Stockton was asked to assume (a) that the Class Vehicles were sold “with a safety defect that was
6 serious enough to create a significant risk of the Subject Vehicles’ engines unexpectedly shutting
7 down and causing an accident or stranding drivers and passengers in unsafe situations,” *id.* ¶ 14,
8 (b) that the defect “was not disclosed and was unknown to consumers at the time they purchased
9 or leased” the Class Vehicles, *id.* ¶ 16, and (c) that the defect “was ‘organic,’ meaning that it was
10 present throughout the life” of the Class Vehicles, *id.* ¶ 17. GM contends that Stockton did not
11 validate (nor attempt to validate) these assumptions. Docket No. 366 (“Stockton Motion”) at 13.

12 Stockton’s economic framework models the effect of the defect on the consumer’s
13 expected utility, and assesses the existence of damages based on what would have happened had
14 the alleged defect been disclosed at the time of purchase or lease. *Id.* ¶¶ 18, 20. He explain that a
15 “consumer receives the benefit-of-the-bargain model when parties’ actions place him or her in the
16 position that he or she would have been had the transaction been performed as agreed.” *Id.* ¶ 23.
17 Applying the model here, Stockton examined “the economic damages sustained by class members
18 caused by their overpayment for the defective” Class Vehicles. *Id.* ¶ 24. Stockton notes that,
19 based on the assumptions about the seriousness of the defect, “the reasonable consumer... would
20 then demand repair of the defect.” *Id.* ¶ 27. Thus, Stockton opines that value of the overpayment
21 due to the defect can be determined “by at least the value or cost of remedying the defect.” *Id.*
22 Relying on what Plaintiffs’ expert, Dr. Werner J.A. Dahm, opined would be needed to repair the
23 Defect (replacement of the pistons and piston rings), which was derived from data from GM’s
24 own cost analysis of that procedure, Stockton notes that the cost would be \$2,700 per vehicle, or
25 \$3,215 per vehicle on an inflation-adjusted basis. *Id.* ¶¶ 35-37. GM argues that Stockton did not
26 verify or provide any independent analysis to justify his assumption that the cost of a replacement
27 piston ring is \$2,700. Stockton Motion at 13.

28

4. GM's Expert Kuhn

GM's technical expert, Robert Kuhn, is an automotive systems engineer. Docket No. 370-1 ("Kuhn Report") § 2.1. Kuhn's report concludes that, based on his review of the record evidence and data on non-Class Vehicles with different engine designs, Plaintiffs cannot support their claim of a uniform design defect – in part, because the Class Vehicles have different components. *Id.* § 1.0(1)-(6).

At issue in the pending motion are two of Kuhn's opinions. First, Kuhn opines that, based on his GM warranty data, that the oil consumption-related warranty repair rate for the Class Vehicles is approximately three percent. *Id.* § 1.0(3). And, second, Kuhn concludes that "this trend and magnitude" of the repair rate is "not consistent with the existence of an inherent oil consumption defect within the entire subject engine population," *id.*, but rather "normal variations in performance due to the use and maintenance of those engines," *id.* § 4.4. Plaintiffs object that Kuhn did not employ a reliable methodology for reaching either of these two conclusions. Docket No. 365 ("Kuhn Motion") at 4-5.

III. LEGAL STANDARD

A. Fed. R. Evid. 702 and Daubert Challenges

Under *Daubert*, in assessing the admissibility of expert testimony under Federal Rule of Evidence 702,² the Court must perform "a preliminary assessment of whether the reasoning or methodology underlying the testimony is scientifically valid and of whether that reasoning or methodology properly can be applied to the facts in issue." *Daubert*, 509 U.S. 579, 592–93; *see also Kumho Tire Co., Ltd. v. Carmichael*, 526 U.S. 137 (1999) (*Daubert* standards apply to all expert testimony, not only scientific experts). The Supreme Court has identified a non-exhaustive list of factors that may bear on the inquiry:

- whether the theory or technique can be or has been tested;

² "A witness who is qualified as an expert by knowledge, skill, experience, training, or education may testify in the form of an opinion or otherwise if: (a) the expert's scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue; (b) the testimony is based on sufficient facts or data; (c) the testimony is the product of reliable principles and methods; and (d) the expert has reliably applied the principles and methods to the facts of the case." Fed. R. Evid. 702.

- whether the theory or technique has been subjected to peer review and publication;
- the known or potential rate of error with a scientific technique;
- acceptance of the technique by a relevant scientific community;

Id. at 593–94; *see also United States v. Hankey*, 203 F.3d 1160, 1167 (9th Cir. 2000). None of these factors is dispositive and, ultimately, “[t]he inquiry envisioned by Rule 702 is . . . a flexible one” which is focused “solely on principles and methodology, not on the conclusions that they generate.” *Id.* at 594–95. Under Rule 702 and *Daubert*, “[t]he duty falls squarely upon the district court to act as a gatekeeper to exclude junk science that does not meet Federal Rule of Evidence 702’s reliability standards.” *Estate of Barabin v. AstenJohnson, Inc.*, 740 F.3d 457, 463 (9th Cir. 2014) (quotation and citation omitted). Moreover, “[t]he trial judge also has broad latitude in determining the appropriate form of the inquiry.” *Id.* at 463.

In this role, the “judge is a gatekeeper, not a fact finder,” and the “gate [should] not be closed to [a] relevant opinion offered with sufficient foundation by one qualified to give it.” *Primiano v. Cook*, 598 F.3d 558, 568 (9th Cir. 2010). The purpose of the gatekeeping role is to ensure that expert testimony is “properly grounded, well-reasoned and not speculative,” but it is not meant to substitute for “[v]igorous cross-examination, presentation of contrary evidence, and careful instruction on the burden and proof [which] are the traditional and appropriate means of attacking shaky but admissible evidence.” Fed. R. Evid. 702, Adv. Comm. Notes (2000) (quotation omitted). Thus, “[a]fter an expert establishes admissibility to the judge’s satisfaction, challenges that go to the weight of the evidence are within the province of a fact finder, not a trial court judge.” *Pyramid Technologies, Inc. v. Hartford Cas. Ins. Co.*, 752 F.3d 807, 814 (9th Cir. 2014).

Because the Court acts as a gatekeeper and not a factfinder, an expert whose methodology is otherwise reliable should not be excluded simply because the facts upon which his or her opinions are predicated are in dispute, unless those factual assumptions are “indisputably wrong.” *Guillory v. Domtar Indus. Inc.*, 95 F.3d 1320, 1331 (5th Cir. 1996); *see also* Fed. R. Evid. 702, Adv. Comm. Notes (2000) (explaining that “[w]hen facts are in dispute, experts sometimes reach different conclusions” and a trial court is not “authorize[d] ... to exclude an expert’s testimony on the ground that the court believes one version of the facts and not the other”). Indeed, Rule 702 is

1 “broad enough to allow an expert to rely on hypothetical facts that are supported by the evidence.”
 2 Fed. R. Evid. 702, Adv. Comm. Notes (2000). “It traditionally falls upon cross-examination to
 3 negate the facts or factual assumptions underlying an expert's opinion.” *In re MyFord Touch*
 4 *Consumer Litig.*, 291 F. Supp. 3d 936, 967 (N.D. Cal. 2018).

5 IV. ANALYSIS

6 A. GM’s Motion to Exclude Opinions and Testimony of Dr. Dahm (Docket No. 363)

7 GM moves to exclude the opinions and testimony of Dr. Dahm from trial in their entirety.
 8 Dahm Motion at 9. GM advances three arguments in support of its position. The Court addresses
 9 each in turn.

10 1. Dr. Dahm’s Qualifications

11 First, GM argues that Dr. Dahm’s training and expertise in aeronautical engineering do not
 12 qualify him to opine or testify on issues related to automotive engineering, warranty data, safety,
 13 repair costs or issues related to human behavior. Dahm Motion at 17-20. Rule 702 requires that a
 14 witness who seeks to testify as an expert have adequate “knowledge, skill, experience, training, or
 15 education” to qualify as an expert. Fed. R. Evid. 702. GM contends that Dr. Dahm is unqualified
 16 under Rule 702 because “[h]e has no experience in designing automobiles or analyzing human
 17 factors in automotive operation,” “has never worked for an automobile manufacturer in any
 18 capacity,” “has never been asked by an automotive manufacturer to design or evaluate a piston
 19 ring system or engine lubrication system, or to diagnose the root cause of piston ring wear or
 20 excess oil consumption (or any other automotive issues).” Dahm Motion at 18.

21 GM’s characterization of the requisite expertise to satisfy Rule 702, however, is too narrow
 22 and overstates the topics on which Dr. Dahm opines. Dr. Dahm need not demonstrate past
 23 experience investigating the precise issues in this litigation. The scope of Dr. Dahm’s assignment
 24 in this case was to provide his “independent opinions regarding combustion, lubrication, ring
 25 sealing, heat transfer and related aspects of the Gen IV 5.3L Vortec engines in the Class Vehicles,
 26 in particular as they relate to oil consumption, engine performance, [and] piston ring wear[.]”
 27 Dahm Report ¶ 24. It is undisputed that Dr. Dahm has extensive training, expertise in and has
 28 published widely on the topics of fluid dynamics, combustion, heat transfer and engines. *Id.* ¶ 7;

1 *see generally id.*, Exh. A (“Dahm CV”). Dr. Dahm explains that, “The fields of mechanical and
2 aerospace engineering are closely related, and both are based on the same major technical
3 disciplines. . . . The main technical subjects involved in this litigation, including fluid dynamics,
4 combustion, heat transfer, lubrication, and engines, are taught to students of both mechanical and
5 aerospace engineering, and engineers practicing in these fields may have degrees in either
6 mechanical or aerospace engineering.” *Id.* ¶ 6; *see also* Dahm Affidavit (“I do not have any
7 degrees in aerospace engineering. For historical reasons the department at CalTech in which I
8 obtained my Ph.D. degree refers to itself as an aeronautics department, yet not a single technical
9 course offered by that department dealt with aircraft or spacecraft. Instead, the technical courses
10 that I took as part of my Ph.D. program dealt primarily with fluid dynamics, thermodynamics, and
11 combustion, and the dissertation research that I conducted in my Ph.D. degree program dealt
12 specifically with fluid dynamics relevant to internal combustion systems, including automotive
13 engines.”). Additionally, Dr. Dahm has published in the Society of Automotive Engineering
14 regarding fluid motions in combustion engines, such as those used in automotive, and has
15 published an original design for a combustion engine. Docket No. 374-2 (“Dahm Depo.”) at
16 17:13 – 21:04.

17 GM cites cases in which courts excluded the testimony or expressed skepticism about the
18 qualifications of experts whose backgrounds did not clearly align with the issues on which they
19 opined. *Id.* at 18-19. Those cases all involved fact-specific inquiries applying Rule 702’s
20 standard. Here, the primary focus of Dr. Dahm’s opinions is on the mechanics, design and
21 functioning of a combustion engine, including heat transfer and flow of oil within the engine. *See*
22 Dahm Report ¶ 233. These are topics on which Dr. Dahm has demonstrated adequate
23 “knowledge, skill, experience, training” and “education” to qualify as an expert. Fed. R. Evid.
24 702. GM’s citation to Magistrate Judge Goodman’s recommendation to exclude Dr. Dahm’s
25 testimony in *Tershakovec v. Ford Motor Co.*, No. 17-21087-CIV, 2021 WL 2592390, at *9 (S.D.
26 Fla. May 12, 2021). As an initial matter, as GM notes, Magistrate Judge Goodman’s
27 recommendation to exclude Dr. Dahm has not yet been adopted; Judge Moreno will hold an
28 evidentiary hearing on Dr. Dahm’s qualification to opine as an expert in that case in January 2022.

1 *See Tershakovec v. Ford Motor Co.*, No. 17-21087-CIV, 2021 WL 3578011 at *3 (S.D. Fla. Aug.
2 13, 2021). Even so, Magistrate Judge Goodman’s reasoning in that case, which involves
3 allegations of Ford’s misrepresentations about vehicles that experienced overheating on racetracks
4 despite being advertised as track-capable, is not applicable here. The recommendation noted that
5 “Dr. Dahm, despite his expertise in aerospace engineering and thermal management technology,
6 lacks a reliable foundation to express his opinions regarding the *Subject Vehicles’ capabilities*
7 *under track or public road conditions* that are central issues to this case.” 2021 WL 2592390, at
8 *9 (emphasis added). By contrast, Dr. Dahm’s opinions regarding the design and functioning of
9 the engines at issue does not depend on any specific context in which the vehicles are used.

10 GM also overstates the extent to which Dr. Dahm’s opinions bear on “human behavior,”
11 on which, GM claims, he lacks expertise. Dr. Dahm’s opinions in this regard are limited to his
12 views about how drivers engage with engine alert systems and the risks to safety that may result
13 from their engagement and reactions to the systems. Dahm Report ¶¶ 192-227. Dr. Dahm states
14 he has experience to opine on this issue based on his work with “human factors specialists in the
15 Air Force Research Laboratory (AFRL) Human Effectiveness Directorate and Information
16 Directorate.” Dahm Affidavit ¶ 18. He explains that he reviewed the work of “human factors
17 specialists [who] studied how [remotely piloted aircraft] operators reacted to alerts that were
18 presented to them in various ways and concluded that such sudden alerts caused measurable
19 impairment of operators’ situational awareness, which in turn led to safety risks.” *Id.* Dr. Dahm,
20 thus, has adequate experience to opine on the interaction between drivers and the alert systems in
21 Class Vehicles. Whether he employed a reliable methodology to do so is a separate question.

22 2. Dr. Dahm’s Methodologies

23 GM’s second argument is that Dr. Dahm’s opinion and testimony should be excluded from
24 trial because they fall short of the admissibility standards requiring an expert’s testimony to be
25 “based upon sufficient facts or data” and be “the product of reliable principles and methods” that
26 are appropriately applied to those facts. *Holt v. Finander*, No. 15-CV-05089, 2021 WL 1255418,
27 at *2 (C.D. Cal. Feb. 9, 2021) (internal quotation marks and citation omitted); *Abarca v. Franklin*
28 *Cnty. Water Dist.*, 761 F. Supp. 2d 1007, 1021 (E.D. Cal. 2011) (opinions must be “grounded in

1 the methods and procedures of science,” not the say so of the expert). GM objects to the bases of
 2 three categories of Dr. Dahm’s opinions.

3 a. The Presence of the Alleged Oil Consumption Defect

4 GM argues that Dr. Dahm did not rely on sufficient facts or employ a reliable principle or
 5 method to conclude that the alleged oil consumption defect is present, common and the same in all
 6 of the Class Vehicles, noting that Dr. Dahm did not test, inspect, examine or physically handle any
 7 Class Vehicle, engine or engine component to reach his conclusion. Dahm Motion at 20-21. GM
 8 further observes that Dr. Dahm did not do any independent research into the rates at which alleged
 9 symptoms of oil consumption occur in Class Vehicles relative to industry norms. *Id.* at 21. While
 10 GM’s observations about *what was not included* in Dr. Dahm’s analysis is accurate, it does not
 11 necessarily follow that the facts and methodology on which Dr. Dahm *did* rely are insufficient and
 12 unreliable. Closer scrutiny is required.

13 Dr. Dahm based his opinion that a defective piston ring design is a cause of the alleged oil
 14 consumption defect based on his review of evidence produced in the litigation, including
 15 deposition testimony and exhibits, and through application of engineering principles related to
 16 fluid dynamics, combustion, heat transfer, lubrication and engine design. Dahm Report ¶¶ 55-58,
 17 63-65, 81-83, 92-133, Exh. C. Dr. Dahm’s report, however, goes further than opining that piston
 18 ring wear is *a* cause of the oil consumption defect: he concludes that ring wear is the *root cause* of
 19 the oil consumption defect, that it is present in *all* Class Vehicles, is precisely the same in *all* Class
 20 Vehicles, that the oil consumption defect is unaffected by how the vehicle owner drives or
 21 maintains their vehicle, and the impacts from the oil consumption defect are occurring in each and
 22 every class vehicle regardless of whether the owner is aware of those impacts or not. *Id.* ¶ 65. Dr.
 23 Dahm concludes his analysis demonstrated that “there is no other single root cause [other than a
 24 design defect in the piston ring] that explains the totality of the data in this case.” Dahm Depo at
 25 87:11-88:04; Dah Report ¶ 94. Throughout the report, Dr. Dahm cites the record evidence on
 26 which he bases his analysis and opinion that abnormal wear on the piston rings is the root cause of
 27 the oil consumption defect. *See* Dahm Report §§ VII-XII.

28 GM argues that Dr. Dahm’s methodology is flawed because he did not conduct an

1 empirical analysis to assess the frequency with which any impacts of the alleged defect actually
 2 occurred in the Class Vehicles, did not compare the prevalence of the defect to industry standards,
 3 and did not analyze that mileage at which the defect has manifested or would manifest in Class
 4 Vehicles. Dahm Motion at 23. GM also argues there are internal inconsistencies in Dr. Dahm's
 5 report, such as his opinion that only 3% of Class Vehicles ever required a piston ring replacement
 6 as compared to his conclusion that *all* Class Vehicles suffer from the piston ring design defect. *Id.*
 7 at 24. Finally, GM points out that Dr. Dahm concedes that he cannot conclude what exactly is
 8 incorrect or defective about the piston ring design:

9 Q. So if I understand what you just said correctly, that you don't
 10 have an opinion about what specifically is, to use your word,
 incorrect in the piston ring design of these engines?

11 A. Well, I wouldn't -- I wouldn't state it that way. The piston rings
 12 are clearly failing to perform the three functions that the piston rings
 13 have to perform in an engine and the fact that they are failing to
 14 perform that function as is evidenced. As I said, from the totality of
 the evidence here, it indicates that there is some inadequacy in the
 piston ring system design.

15 Q. But you are not offering an opinion about specifically what that
 inadequacy is?

16 A. Correct.

17 Dahm Depo at 90:04-18.

18 Q. What specifically about the piston ring system in the LC9
 19 engines are you contending is incorrect?

20 A. And as I testified earlier, the available evidence is not sufficient
 21 to determine specifically which one or more attributes of the piston
 22 ring system design were inadequate, but the data are more than
 adequate to show that it has to be an inadequate piston ring system
 design

23 *Id.* at 137:15-25.

24 GM's arguments are persuasive. While Dr. Dahm generally alludes to the fact that he
 25 applied standard engineering principles to his analysis, his report does not specifically describe
 26 what scientific principles or methods he applied to determine that the root cause of the oil
 27 consumption defect is a design defect in the piston rings. Let alone does he explain how he
 28 reached his conclusion that *every* Class Vehicle experiences the *same* defect. Dr. Dahm's report

1 seems to reason backwards, by starting with the conclusion that the piston rings are defective, and
2 then showing how the evidence in the record is consistent with this theory. *See generally* Dahm
3 Report § XI (“Ring Wear is the Root Cause of the Oil Consumption Defect”).

4 But despite Dr. Dahm’s assertion that no other root cause can explain the totality of the
5 evidence, Dr. Dahm does not provide a basis for this conclusion. Dr. Dahm does not
6 systematically assess and rule out other possible root causes, nor does he analyze data or create a
7 model to account for his own concession of other factors that could cause the defects shown in the
8 record. *See e.g.*, Dahm Report ¶ 59 (“All piston rings will display gradually increasing wear as
9 they operate. . . Modern engines routinely have an engine life that extends to 175,000 miles or
10 more before a ‘ring job’ may be necessary to replace the worn piston rings.”); Dahm Depo at
11 85:15-86:21 (“Q: But you would agree with me there are, for example, a variety of reasons that an
12 engine may experience engine noise? A: Sure, there are other reasons as well, yeah. Q: And
13 there’s a number of reasons why an engine may run rough? A: There can be, yes. Q: And a
14 number of reasons that could cause an engine to stall? A: Yes, yes.”). Dr. Dahm does not explain
15 the methodology underlying his opinion that a defective piston design is *the root cause* of the
16 problems, and is present in *every* vehicle, regardless of any differences in maintenance or use of
17 that vehicle.

18 Dr. Dahm’s deficient analysis and lack of clear methodology is apparent in his failure to
19 identify any particular defect in the piston rings, despite his conclusion that *all* Class Vehicles
20 suffer from the same defect. In *Grodzitsky v. Am. Honda Motor Co.*, the Ninth Circuit found that
21 an expert was properly excluded from testifying to his opinion that there was “a common defect in
22 over 400,000 window regulators for class vehicles” where the expert examined only 26 of the
23 regulators at issue, “conceded he did not conduct a comparison with window regulators from other
24 manufacturers,” “did not review any industry data concerning replacement rates for window
25 regulators,” and “confirmed that he did not ‘have an opinion on what [Honda] should have done’
26 in designing a proper window regulator.” 957 F.3d 979, 986 (9th Cir. 2020). Such an approach,
27 the court concluded, did not constitute a reliable methodology. *Id.*; *see also Cates v. Whirlpool*
28 *Corp.*, No. 15-CV-5980, 2017 WL 1862640, at *12 (N.D. Ill. May 9, 2017) (excluding testimony

1 where expert failed to “identify . . . precisely what he believes the common defect to be that causes
2 failure during self-cleaning”). Dr. Dahm’s method to arrive at his opinion as to the *root cause* of
3 the oil consumption defect suffers from similar deficiencies. Dr. Dahm calculated that
4 approximately 3% of Class Vehicles received a piston assembly replacement, but does not explain
5 how that rate supports his conclusions that *all* vehicles have the same defect that manifests in the
6 same way. *Cf.* Dahm Report ¶¶ 189-90. He provides no scientific explanation or methodology for
7 his extrapolation. Dr. Dahm summarizes the testimony of defects in the vehicles owned by named
8 Plaintiffs, but provides no showing that the select testimony of Plaintiffs is a representative sample
9 of all owners of the Class Vehicles. *Cf. id.* ¶¶ 78-79. Again, he provides no basis from which to
10 extrapolate the experience of a handful of named plaintiffs to the general population of all owners.
11 And to the extent Dr. Dahm’s conclusions are drawn from his review of GM’s internal document
12 and deponent testimony, Dr. Dahm does not apply a scientific methodology to analyze that record
13 evidence. *See infra* Analysis § A(3) (Whether Dr. Dahm’s Opinions Invade the Province of the
14 Jury). Without determining *how* the Class Vehicles are allegedly defective through scientific
15 testing and analysis, without opining what GM should have done differently to correct the defect,
16 and without ruling out alternative causes of the purported impacts of oil consumption, and without
17 explaining how he can derive a general conclusion about all vehicles from the points of evidence
18 he cites, Dr. Dahm has not shown that his opinions as to the root cause and issues in *all* Class
19 Vehicles are “the product of reliable principles and methods” that are appropriately applied to the
20 facts in the record. *Holt*, 2021 WL 1255418, at *2.

21 Thus, the Court excludes Dr. Dahm’s testimony as to the root cause of the oil consumption
22 defect, his opinion that a piston ring design defect is present in *all* Class Vehicles, and his
23 conclusions as to other issues in *all* Class Vehicles as summarized in ¶ 65 of the Dahm Report.

24 b. Repair Cost

25 GM argues that Dr. Dahm fails to provide a reliable methodology that the cost to replace a
26 defective piston ring is \$2,700. This objection lacks merit, however, because Dr. Dahm does not
27 *opine* on the issue of the cost of repair, but references the cost of repair that was recited in a
28 document produced by GM providing a cost analysis of the replacement cost of a piston ring. *See*

1 Dahm Report ¶¶ 229-232. GM is welcome to challenge the propriety or relevance of Dr. Dahm’s
2 reliance on that document, but his reference to that figure need not be excluded. *See Alaska Rent-*
3 *A-Car v. Avis Budget Grp., Inc.*, 738 F.3d 960, 969 (9th Cir. 2013) (“Shaky but admissible
4 evidence is to be attacked by cross examination, contrary evidence, and attention to the burden of
5 proof, not exclusion.”).

6 c. Adequacy of Oil Pressure Instruments and Safety Risks Posed by Alert
7 System

8 GM asserts that Dr. Dahm fails to provide a reliable method to support his opinions that (a)
9 the oil pressure instrumentality in Class Vehicles leads drivers to incorrectly believe that they have
10 adequate oil pressure, and (b) that the Class Vehicles’ alert systems create unsafe driving
11 distractions and the possible need to pull over puts drivers at risk of injury, including robbery,
12 assault, rape and murder. Dahm Motion at 20 (citing Dahm Report ¶¶ 148-83, 192-233).

13 As to Dr. Dahm’s opinions that the oil pressure instruments in the Class Vehicles are
14 insufficient to allow drives to monitor their oil level, Dr. Dahm based his opinion a review of 17
15 videos of tests performed by Dr. Ball about the functionality of the oil pressure sensors and
16 corresponding alert system. *Id.* ¶¶ 202-208. Dr. Dahm explains that the methods used in the tests
17 are consistent with those used by mechanical engineers, and concludes that the sensor system is
18 faulty based on the results from the tests. *Id.* GM does not contest the propriety of reliability of
19 this method. Thus, there is no basis to exclude Dr. Dahm’s opinions about the adequacy of the oil
20 pressure instruments for lack of reliable methodology.

21 However, Dr. Dahm fails to provide a scientific basis for his opinions that the Class
22 Vehicles’ alert system would be distracting to drivers, and necessarily would place the safety of
23 drivers at risk. Although Dr. Dahm has experience through his time in the U.S. Air Force
24 examining the interaction between people and instrument panels, including alert systems, Dr.
25 Dahm does not describe any methodology from that experience that he applied to arrive at these
26 conclusions in this case. Dr. Dahm asserts that the appearance of “warnings can have a
27 substantially distracting effect on [drivers’] driving safety, since part of their attention and
28 situational awareness shifts from being focused on driving.” *Id.* ¶ 224. Dr. Dahm does not

1 explain how he came to this conclusion, that the appearance of a warning light in the context of
 2 the Class Vehicles could shift a driver’s attention from the road. Nor does Dr. Dahm provide any
 3 methodology underlying his opinion that drivers who are forced to pull over due to a warning
 4 from the alert system will be at “elevated risk of harm” including from “robbery, assault, rape” or
 5 “murder.” *Id.* ¶ 222. For instance, he cites no data or study about such risks. And again, that is
 6 not an issue to which he has applied his scientific expertise.

7 Thus, the Court finds that Dr. Dahm’s opinions as to the safety risks posed by the Class
 8 Vehicles’ alert system are not grounded in a scientific methodology. However, he may opine as to
 9 the inadequacy of the oil pressure instruments.

10 3. Whether Dr. Dahm’s Opinions Invade the Province of the Jury

11 GM’s third argument is that Dr. Dahm’s opinions and testimony should be excluded to the
 12 extent they are “merely summariz[ing]” and “gratuitously interpret[ing]” GM’s documents, fact-
 13 witness testimony, and other record evidence. *See Exeltis USA Inc. v. First Databank, Inc.*, No.
 14 17-CV-04810, 2020 WL 7025089, at *5 (N.D. Cal. Nov. 30, 2020) (internal quotation marks and
 15 citation omitted); *Dep’t of Toxic Substances Control v. Technichem, Inc.*, No. 12-CV-05845, 2016
 16 WL 1029463, at *1 (N.D. Cal. Mar. 15, 2016) (excluding expert opinion in part because expert
 17 “often does no more than regurgitate information given to him by other sources . . .”).

18 Significant portions of Dr. Dahm’s report involves his review of evidence in the record,
 19 including of deposition testimony and internal GM documents produced during discovery. *See*
 20 *e.g.*, Dahm Report § XI (reviewing GM’s January 2010 Red-X Executive Report, deposition
 21 testimony of Thomas Halka, and deposition testimony of Wai Nguyen). An expert may review the
 22 record evidence to extract factual bases from which to apply reliable methodologies in deriving an
 23 opinion. An expert, however, may not restate or summarize record evidence and then state a
 24 conclusion without applying a methodology that is reliable and which evinces his/her expertise.
 25 *Huawei Techs., Co. v. Samsung Elecs. Co.*, 340 F. Supp. 3d 934, 992 (N.D. Cal. 2018) (expert
 26 testimony should be excluded “[w]here the jury is in as good a position as the expert to draw
 27 conclusions from the evidence, and is capable of drawing its own inferences . . .”) (internal
 28 quotation marks and citation omitted).

1 Here, Dr. Dahm quotes extensively from the deposition testimony of GM deponent
2 Thomas Halka, and then concludes that that Halka’s testimony “shows that GM changed from the
3 ‘251 material to the ‘278 ring material in the Class Vehicles, it saw continued excessive piston
4 ring wear in the Gen IV 5.3L engines that then caused it to switch to a more wear-resistant ‘525
5 material, and then eventually switch[ed] to the even more wear-resistant PVD wring material.”
6 Dahm Report ¶¶ 116-19. Dr. Dahm’s “conclusion” is nothing more than a summary of Mr.
7 Halka’s testimony. Dr. Dahm provides no analysis or reliable methodology interpreting the
8 testimony which employs his expertise. Such testimony is inappropriate under Rule 702, as the
9 “jury is in as good a position as [Dahm] to draw conclusions from the evidence, and is capable of
10 drawing its own inferences.” *Huawei*, 240 F. Supp. at 992.

11 As another example, Dr. Dahm dedicates a section of his report to his “opinion” that “GM
12 had ample evidence of the oil consumption defect.” Dahm Report § XV. Throughout this section,
13 Dr. Dahm cites deposition testimony and internal GM documents produced through discovery to
14 restate nothing more than that what is stated in the testimony or documents. *See e.g., id.* ¶ 170
15 (“The evidence shows that soon after the 2007 introduction of its Gen IV 5.3L Vortec engines. . .
16 GM became aware of excessive oil consumption in these engines. This is clearly verified in the
17 deposition testimony of GM’s Grant Tappen. . . and in the deposition testimony of GM’s Thomas
18 Halka”); *id.* ¶¶ 169-78. Again, such summarizing of the record evidence by the expert without
19 applying any methodology is not appropriate under Rule 702. *Huawei*, 240 F. Supp. at 992.

20 Thus, the Court finds that the portions of Dr. Dahm’s report which essentially summarize
21 evidence already in the record without the application of his expertise through reliable
22 methodologies invade the province of the jury and are not appropriate under Rule 702. Dr.
23 Dahm’s opinions and testimony are therefore excluded to the extent that they consist of unadorned
24 restatements or summaries of evidence already in the record. By contrast, Dr. Dahm’s opinions
25 which employ his expert knowledge to explain the scientific and engineering principles relevant to
26 the issues in this case, such as his discussion of the purpose of piston rings and their relation to
27 engine operation in general, are permissible under Rule 702. *See e.g., Dahm Report* ¶¶ 41-63.
28

1 4. Conclusion Re Dahm Motion

2 For the reasons explained above, the Court **grants in part** and **denies in part** GM's
3 motion to exclude Dr. Dahm's opinions and testimony from trial. The Court excludes Dr. Dahm's
4 opinions that (1) a deficiency in the design of the piston rings in Class Vehicles is the *root cause*
5 of the alleged oil consumption defect, (2) that the piston ring design defect is present in *all* Class
6 Vehicles (and his additional opinions as to common issues in *all* Class Vehicles), and (3) that
7 Class Vehicles' alert system causes distractions to drivers that pose safety risks to drivers.
8 Additionally, the Court **excludes** Dr. Dahm's testimony to the extent it summarizes or restates
9 evidence already in the record without applying a reliable methodology to interpret or analyze
10 such evidence. The remainder of Dr. Dahm's report and opinions are consistent with Rule 702.

11 B. GM's Motion to Exclude Opinions and Testimony of Stockton (Docket No. 366)

12 GM moves to exclude the opinions and testimony of Plaintiffs' expert Stockton in their
13 entirety. Stockton Motion at 8. GM's arguments amount to two objections. The Court addresses
14 each in turn.

15 1. Stockton's Reliance on Assumptions

16 First, GM argues that Stockton's opinions lack a sufficient factual basis before the
17 opinions are based on unverified assumptions. Stockton Motion at 15. Specifically, GM objects
18 to Stockton's reliance on the assumptions that (a) all Class Vehicles are defective, (b) the defect
19 inevitably results in dangerously excessive oil consumption, (c) the defect is organic and present at
20 the time of sale, and (d) the defect would affect all consumers in the same way and could be
21 remedied in the same way, through a \$2,700 repair. *Id.*

22 GM's argument, however, fails to grapple with the fact that Stockton is a *damages expert*,
23 and, thus, is entitled to *assume* liability in order to model the damages. *See e.g., Indect USA Corp.*
24 *v. Park Assist, LLC*, No. 318CV02409BENDEB, 2021 WL 4311002, at *3 (S.D. Cal. Sept. 22,
25 2021) (“[I]t is well established that experts on damages can assume causation.”); *Orthofix, Inc. v.*
26 *Gordon*, Case No. 1:13-cv-1463, 2016 WL 1273160, at *3 (C.D. Ill. Mar. 31, 2016) (“It is entirely
27 appropriate for a damages expert to assume liability for the purpose of his or her opinion. To hold
28 otherwise would be illogical.”); *Luitpold Pharms., Inc. v. Ed. Geistlich Sohne A.G. für Chemische*

1 *Industrie*, No. 11-cv-681, 2015 WL 5459662, at *10 (S.D.N.Y. Sept. 16, 2015) (“[A] damages
2 expert does not need to perform her own causation analysis to offer useful expert testimony.”).

3 Moreover, Stockton’s reliance on the \$2,700 cost of repair figure is well-grounded, not
4 only because Mr. Stockton is entitled to rely on this technical opinion provided by a technical
5 expert, but also because the figure itself is supported in the record by GM’s own cost analysis. *See*
6 *United States ex rel. Jordan v. Northrop Grumman Corp.*, No. CV 95-2985 ABC (EX), 2003 WL
7 27366224, at *6 (C.D. Cal. Jan. 6, 2003) (Damages expert’s “reliance on assumptions provided by
8 counsel or other experts is not a bar to her testimony.”).

9 Finally, GM faults Mr. Stockton for assuming “that the alleged defect would impact prices
10 paid in precisely the same way for all consumers,” Stockton Motion at 17, yet this flows from the
11 assumption that defect is a safety defect for all consumers and that Stockton’s damages calculation
12 is based on the response that an objectively reasonable consumer would make. As Stockton
13 explains in describing the assumptions in his model, any consumer “applies the reasonable
14 expectation that the vehicle is materially safe and free of defects, with an emphasis on the
15 vehicle’s safety elements,” and thus would seek repair of the assumed safety defect. Stockton
16 Report ¶ 31; *see also id.* ¶ 19 (“In seeking to maximize their expected benefits from transactions,
17 consumers make comparative assessments” which “inform the judgments that they make about the
18 expected outcomes associated with purchasing certain products”); *id.* ¶ 22 (“In accordance with
19 economic theory, concealing a safety defect from consumers and potential consumers directly
20 impairs the consumer’s assessment of a potential transaction and leads to a different outcome . . .
21 that what would have occurred had the defect been disclosed”).

22 GM is entitled to challenge Stockton’s assumptions at trial – as much as GM’s own
23 economic expert, Dr. Befurt assumes in his report opining that the oil consumption defect is not a
24 safety defect. *See generally* Docket No. 367-6. The fact that GM disagrees with Stockton’s
25 assumptions is not a ground to exclude Stockton’s testimony altogether under *Daubert*. Where a
26 party challenges the expert’s assumptions, the challenges may go to impeachment, rather than
27 admissibility. *Alaska Rent-A-Car, Inc*, 738 F.3d at 969.
28

2. Stockton's Methodology

GM argues that although Stockton “purports to rely on the economic theory of ‘expected utility;’” his methodology as applied is unreliable because he fails to account for “each individual purchaser’s level of perceive risk and tolerance for that risk” in his model. Stockton Motion at 19. GM argues that for Stockton to correctly apply the expected utility theory here, we would have needed to consider “(1) the rate at which the alleged defect manifested in the Class Vehicles, (2) how the alleged defect manifested in the Class Vehicles, (3) whether and to what extent any needed repairs may be covered by warranty, and (4) variations in consumers’ risk-tolerance and decision-making process when purchasing and/or leasing automobiles.” *Id.* Stockton’s failure to do so and *assumption* that the defect poses a serious safety defect in all vehicles and all consumers will seek the same fix renders his methodology unreliable, or so GM contends.

GM’s argument is premised on its same, incorrect objection to Stockton’s *assumptions* that the alleged defect is a safety defect present in all Class Vehicles. As already explained, Stockton is entitled to assume liability on the theories that Plaintiffs have alleged in this action in order to develop his damages model. The Court previously analyzed Stockton’s benefit-of-the-bargain theory and damages model at the class certification stage of this litigation, and found it consistent with Ninth Circuit precedent. Stockton’s opinions are consistent with that model of damages by permissibly assuming that reasonable consumers who are subjected to the same safety defect in their vehicle would each be expected to seek a remedy that restores them to the position of receiving the non-defective vehicle for which they bargained. *See Sloan v. Gen. Motors LLC*, No. 16-CV-07244-EMC, 2020 WL 1955643, at *48 (N.D. Cal. Apr. 23, 2020) (“[T]he Ninth Circuit, in a factually analogous case [*Nguyen v. Nissan N. Am., Inc.*, 932 F.3d 811, 817 (9th Cir. 2019)], has approved of the damages model that Plaintiffs put forward here. In addition, benefit-of-the-bargain theories, as the one asserted by Plaintiffs herein, are a classic measure of damages in both contract and tort contexts. . . One obvious measure of such damages is the cost to repair the defective product.”); *see also Falco v. Nissan N. Am. Inc.*, No. CV1300686DDPMANX, 2016 WL 1327474, at *12 (C.D. Cal. Apr. 5, 2016) (“By receiving restitution in the amount of average repairs, the class would be getting the benefit of their bargain because they would be put in the

1 same position they would have been had the car not been sold with the defective timing chain
2 system — it is the cost necessary to make the vehicles conform to the value Plaintiffs thought they
3 were getting in the price tendered.”). Thus, the Court rejects GM’s challenge to the reliability of
4 Stockton’s damages methodology.

5 3. Conclusion Re Stockton Motion

6 For the reasons explained above, the Court **denies** GM’s motion to exclude the opinions
7 and testimony of Plaintiff’s damages expert Edward Stockton.

8 C. Plaintiffs’ Motion to Exclude Certain Opinions and Testimony of Kuhn (Docket No. 365)

9 Plaintiffs seek to exclude two opinions from Kuhn’s expert testimony: (1) that the Class
10 Vehicle Oil Consumption failure rate is approximately 3%, and (2) that the warranty data provided
11 by GM is inconsistent with any design defect across the entirety of the Class Vehicles. Kuhn
12 Motion at 4.

13 1. Factual Basis for Kuhn’s Replacement Rate Calculation

14 Plaintiffs argue that Kuhn did not have the data necessary to reliably evaluate vehicle
15 component failure rates, and thus, did not employ a sound methodology for determining a 3%
16 failure rate, nor to opine about what that rate implies about the presence of a design defect across
17 the Class Vehicles. *Id.* Specifically, Plaintiffs contend that Kuhn did not follow his own typical
18 methodology for evaluating component failure rates, which entails looking at customer complaints
19 and raw warranty data. *Id.* at 6. Instead, Plaintiffs object to Kuhn’s reliance on summary
20 information of warranty claims compiled by GM, which did not include the raw warranty data for
21 piston rings or other components that could fail from oil starvation or excess heat caused by oil
22 loss. *Id.* at 7.

23 For clarity, the Court observes that, contrary to Plaintiffs’ suggestion, Kuhn’s report does
24 *not* include any opinions about or refer to a “failure rate,” but, rather, mentions only an “engine
25 repair rate” or “repair rate.” *See* Kuhn Report at 13-14. The parties’ briefing treats the terms
26 “failure rate” and “repair rate” as interchangeable, and the parties do not contend that there is a
27 meaningful distinction between the terms. Thus, the Court understands the parties to be referring
28 to the same 3% “repair rate” that Kuhn identifies in his report.

1 Semantics aside, Plaintiffs’ dispute over the Kuhn’s determination of a 3% repair rate
2 amounts to a challenge to the adequacy of the data on which Kuhn based his opinions. This
3 challenge goes to the weight of Kuhn’s opinions, not to the admissibility of those opinions. *See*
4 *e.g., Sloan v. Gen. Motors LLC*, No. 16-CV-07244-EMC, 2020 WL 1955643, at *38 (N.D. Cal.
5 Apr. 23, 2020) (“The nature of GM's attack on the data upon which Dr. Ball relied illustrates that
6 these are issues that go to impeachment and weight, not admissibility. Dr. Ball has indicated the
7 facts and data (provided to him by GM) upon which he relied to conduct his analysis; although
8 GM disagrees with the data relied upon, it cannot be said that Dr. Ball's opinion is not based on
9 facts or data; to the contrary, it is based on data provided to him by Defendant.”); *POM Wonderful*
10 *LLC v. Coca Cola Co.*, No. CV 08-06237, 2016 WL 5929336, at *8 (C.D. Cal. Mar. 9, 2016)
11 (question of under-inclusiveness of data affects weight not admissibility and “can be adequately
12 addressed on the witness stand, both through cross-examination and through rebuttal testimony.”).

13 Plaintiffs do not identify anything in particular that was deficient in the specific data on
14 which Kuhn relied to derive his conclusion of a 3% repair rate. Indeed, it appears that Plaintiffs’
15 own technical expert reviewed the *same data* and arrived at substantially the *same conclusion*
16 about the repair rate. Kuhn testified that in preparing his report, he reviewed the warranty data
17 from GM’s expert Mr. Pfromm which reflected “all service related to oil consumption claims” and
18 explained his reasoning for why he excluded data on repairs related to replacement of valvetrain
19 components would be overbroad and unnecessary to his analysis. *See* 307-2 (“Kuhn Depo.”) at
20 66:9-25; 68:6-15; 103:8-104:13; 105:23-107:13; 103:8-104:13; 105:23-107:13. Plaintiffs’ expert,
21 Dr. Dahm conducted an analysis of GM’s data produced during the litigation and determined that
22 the percentage of class vehicles sold that received piston assembly replacement was 3.2%. Dahm
23 Report ¶ 189. Dr. Dahm, during his deposition, stated that his review of the GM data regarding
24 the piston assembly replacement rate was in agreement with Kuhn’s. Dahm Depo. at 120:8-20
25 (“[G]iven the limited data that GAM provided. . . by my calculation, the [piston assembly
26 replacement rate] comes out to be about 3.0 percent when you limit the subject engines the way I
27 did, and that agrees with Mr. Kuhn’s report. It’s about 3 percent. That’s the important thing.”).
28 Plaintiffs’ expert’s agreement with the 3% repair rate found by Kuhn tends to undermine

1 Plaintiffs' argument that Kuhn's methodology was unreliable. Plaintiffs' challenge goes to the
2 weight of Kuhn's opinion as to the repair rate, not its admissibility.

3 2. Methodology for Kuhn's Opinion Re "Normal Performance Variations"

4 Plaintiffs object to Kuhn's opinion that the 3% repair rate is inconsistent with a defect
5 affecting *all* Class Vehicles. Plaintiffs' first argument is premised on their same contention that
6 Kuhn's calculation of the repair rate was "based upon his review of an incomplete and misleading
7 slice of GM warranty data." Kuhn Motion at 4. Thus, this objection fails for the same reason that
8 their challenge to the 3% rate fails.

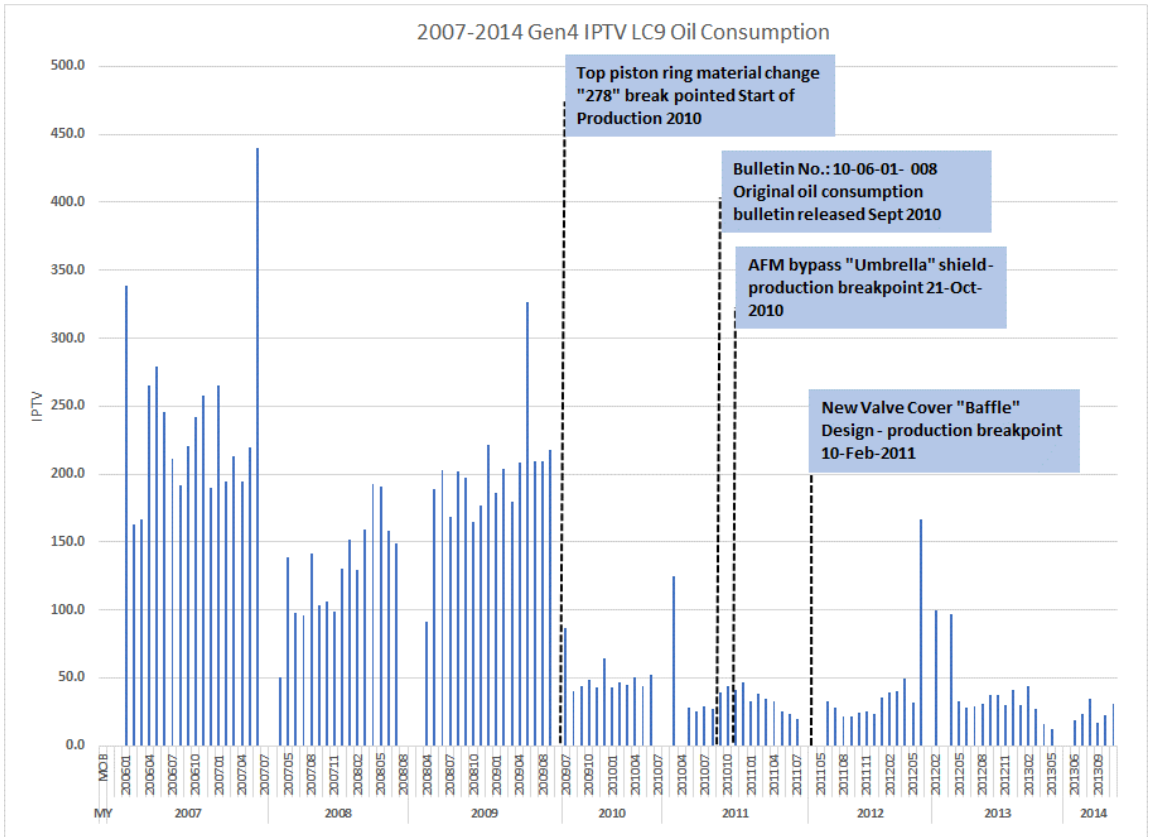
9 Plaintiffs also argue, more generally, that Kuhn "employed no methodology whatsoever –
10 reliable or otherwise," *id.* at 5, to support his challenged opinions, including his view that the 3%
11 repair rate is consistent with "normal performance variations," Kuhn Report § 4.4. The Court
12 agrees. Kuhn fails to provide any basis for his conclusion that the 3% failure rate is inconsistent
13 with a design defect across all class vehicles. Kuhn's reasoning in support of this opinion is as
14 follows:

15 The use of field exposure data in defect trend analysis is also an
16 accepted reliability and investigatory practice used by the NHTSA
17 and experienced technical investigators such as me. Therefore, it is
18 also important to note that the subject engine population (2011-2014
19 MY) is 7 to 10 years old and was subject to a 60 month/100,000-
20 mile powertrain warranty. Consequently, the subject engine
21 population has had significant field exposure in terms of time and
22 accumulated mileage to reliably show that the current repair rate is
23 indicative of the performance of the entire subject engine
24 population. **This 3% repair rate over the course of 7 to 10 years,
25 is not consistent with or indicative of the existence of an inherent
26 oil consumption defect within the entire subject engine
27 population. It is consistent with normal variations in
28 performance due to the use and maintenance of those engines.**

23 Kuhn Report § 4.4.

24 Kuhn gestures to the notion that "defect trend analysis" is an accepted investigatory
25 practice. Kuhn's report includes a chart which demonstrates that the repair rate fell over time as
26 GM introduced various fixes to its engines:

United States District Court
Northern District of California



Subject Engine Repair Rates as of July 2021

See *id.*

But Kuhn does not explain if or how he applied defect trend analysis here. While the data shows a decline in the repair rates of the subject engine, it does not demonstrate that the 3% repair rate “is not consistent with or indicative of the existence of an inherent oil consumption defect.” A declining trend does not necessarily negate the existence of an inherent defect, and Kuhn does not explain why it does here. Nor does the chart or data support Kuhn’s conclusions that the 3% repair rate here is “consistent with normal variations in performance due to the use and maintenance of those engines.” *Id.* Nowhere in Kuhn’s report does he explain the methodology he used to arrive at these conclusions. There is no data, for instance, what the repair rate is for normal variations in engines which are not inherently defective. The Court is left without key information necessary to understand Kuhn’s conclusion: what repair rate would indicate an inherent defect with oil consumption? What is the range of repair rates engines that is consistent for normal variations in performance? What is the basis for those values? Just because the repair rate for engines decreased from 18% for 2007-09 engines to 3% for 2011-14 engines, *id.* § 4.4,

1 how does that justify the conclusion that there is no inherent defect? How is the Court to know
2 that the baseline repair rate for engines is not .1%, such that the 3% rate is 30 times more than
3 what would be expected? Would such a range be consistent with a range of “normal variations in
4 performance?” Kuhn does not answer any of these questions nor otherwise explain the
5 methodology underlying his opinions.

6 Without such information or explanation of the methodology that Kuhn applied to reach
7 these conclusions, Kuhn’s conclusions are grounded in nothing more than his say so. GM cites
8 cases such as *Allstate Ins. Co. v. Kia Motors Am. Inc.* for the proposition that an expert’s training
9 may provide a sufficient basis for the expert’s testimony. *See* No. CV 16-06108, 2017 WL
10 10311211, at *6 (C.D. Cal. Sept. 20, 2017). But Plaintiffs do not challenge Kuhn’s qualifications
11 in general – they challenge his methodology to justify his specific conclusions. “[N]othing in
12 either *Daubert* or the Federal Rules of Evidence requires a district court to admit opinion evidence
13 which is connected to existing data only by the *ipse dixit* of the expert.” *General Electric Co. v.*
14 *Joiner*, 522 U.S. 136, 146 (1997).

15 Thus, the Court excludes Kuhn’s opinions that (1) “This 3% repair rate over the course of
16 7 to 10 years, is not consistent with or indicative of the existence of an inherent oil consumption
17 defect within the entire subject engine population,” and (2) “It is consistent with normal variations
18 in performance due to the use and maintenance of those engines,” Kuhn Report § 4.4.

19 3. Conclusion Re Kuhn Motion

20 For the reasons explained above, the Court **grants in part** and **denies in part** Plaintiffs’
21 motion to exclude certain opinions and testimony of GM’s technical expert Robert Kuhn. Kuhn’s
22 opinions regarding what the 3% repair rate indicates regarding the existence or non-existence of an
23 inherent defect are **excluded**. There remainder of his testimony and opinions are consistent with
24 Rule 702.

25 V. CONCLUSION

- 26 • GM’s Motion to Exclude Dr. Dahm (Docket No. 363): The Court **excludes** Dr.
27 Dahm’s opinions that (1) a deficiency in the design of the piston rings in Class
28 Vehicles is the *root cause* of the alleged oil consumption defect, (2) that the piston

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ring design defect is present in *all* Class Vehicles, and (3) that Class Vehicles’ alert system causes distractions to drivers that pose safety risks to drivers. Additionally, the Court **excludes** Dr. Dahm’s testimony to the extent it summarizes or restates evidence already in the record without applying a reliable methodology to interpret or analyze such evidence. Any such testimony improperly invades the province of the jury.

- GM’s Motion to Exclude Mr. Stockton (Docket No. 366): The Court **DENIES** the motion.
- Plaintiffs’ Motion to Exclude Portions of Mr. Kuhn’s Opinions (Docket No. 365): The Court **excludes** Mr. Kuhn’s opinion that the 3% piston replacement rate “is not consistent with or indicative of the existence of an inherent oil consumption defect within the entire subject engine population” and that the rate is “consistent with normal variations in performance due to the use and maintenance of those engines.” Kuhn Report § 4.4. The remainder of Mr. Kuhn’s report satisfies Rule 702.

This order disposes of Docket Nos. 363, 365 and 366.

IT IS SO ORDERED.

Dated: January 7, 2022


EDWARD M. CHEN
United States District Judge