CHATTER, CLATTER, AND BLINKS: DEFECTIVE CAR ALERTS AND THE ROLE OF TECHOLOGICAL ADVANCES IN DESIGN DEFECT/FAILURE TO WARN CASES

JAMES FORREST MCKELL JR.[1]

ABSTRACT

Car owners are familiar with the warning lights on the dashboard and the beeping sound reminding them to use their seatbelt. But, neither the legislature nor courts have concretely defined the legal nature of these alerts. This iBrief will analyze when a deficient alert becomes a defective product tort claim and determine the appropriate theory under which such claims should be brought.

INTRODUCTION

¶1 In product manufacturing, a design that is not as safe as reasonably possible both subjects users to unnecessary risk and subjects sellers to tort liability. Likewise, the users of products must be supplied with all reasonable warnings to protect them from unknown dangers and to protect manufacturers from prosecution.

¶2 The line between design defect and failure to warn can be difficult to discern. It can also be difficult to discern the difference between optional safety features and features necessary to make a product usable. These distinctions can be explored by analyzing audio and visual alerts in automobiles. With the widespread use of light up displays, beeping noises, and verbal audio cues, differentiating between just safe enough and unsafe can become complicated. Such alarms could be characterized as warnings; thus, a deficiency could amount to a failure to warn of dangerous conditions. Conversely, they could be seen as safety features of the car, like mirrors and seatbelts, subject to design defect claims. After careful analysis, it becomes clear that the range of what warnings are safe enough is broad, but the best reading of case law restricts such deficiencies to design defect litigation.

---

[1] J.D. candidate at Duke University School of Law, 2010; B.A., Wake Forest University, 2003. The author would like to thank Professor Francis McGovern for his guidance and his wife Allison Overstreet McKell for her constant support.

¶3 The only types of defect being considered here are design defect and failure to warn. Manufacturing defects, as unintentional acts with strict liability imposed upon them, can happen to any object regardless of technology and regardless of what component is defective. For the purposes of this analysis, it will be useful to assume all products are accurately manufactured. The only aspects of interest here are those intentionally included by manufacturers which are alleged to be defective.

I. TECHNOLOGY, LEGAL DUTIES, AND OBSOLETE PRODUCTS

¶4 In the course of human progression, new technologies are constantly surpassed by newer technologies. The law recognizes this progression, and where the use of technology is related to legal duties, the use of modern technology is subsumed into that legal duty. If one has a duty to give information to Mr. Smith in California in a timely manner, it would not be sufficient in 2008 to send the letter by ox-drawn wagon. It is assumed that you will and must use some form of electronic communication or else some postal service which can deliver it in a week, rather than in months. Police are expected to utilize forensic evidence in ways unavailable 200 years ago. Doctors will be liable for malpractice if, instead of running necessary tests and proscribing medicine, they treat every illness with bloodletting.

¶5 In this same way, safety features and warnings on products must utilize available technology. Warnings concerning medical procedures can take up many pages; warnings of this length would have been impractical and ineffective before the printing press and inexpensive paper production, when they would have been transmitted orally. Originally, car windshields were made of normal glass;[2] now, a car that does not take advantage of safer glass designs runs a high risk of being found unreasonably dangerous.[3]

¶6 In this way, safe products, safe designs, and safe warnings can all become unsafe when a safer alternative becomes available. In the case of *The T. J. Hooper*,[4] Learned Hand explained how the absence of radio receivers on tugboats made those tugboats defective. At that time, it was not yet common practice for tugboats to carry these radios.[5] Despite that fact, such radios were not expensive, cumbersome, or difficult to use.[6]

---

[2] *See* National Glass Association, *Your Windshield is Not Just a "Wind-Shield" Any More*, http://www.speedyglass.com/auto-glass-news/2009/03/your-windshield-is-not-just-wind-shield.html, http://www.speedyglass.com/auto-glass-news/2009/04/your-windshield-is-not-just-wind-shield.html (last visited Mar. 22, 2010).
[3] *See id.*
[4] The T. J. Hooper, 60 F.2d 737, 739 (2d Cir. 1932).
[5] *Id.*
[6] *Id.*

Analyzing the role of common practice or custom in determining reasonable safety provisions, the court said that

> in most cases reasonable prudence is in fact common prudence; but strictly it is never its measure; a whole calling may have unduly lagged in the adoption of new and available devices. . . . Courts must in the end say what is required; there are precautions so imperative that even their universal disregard will not excuse their omission.[7]

The mere availability of this technology made its absence tortuous.

¶7 There are two considerations in determining when new technology must be utilized to make a product reasonably safe. The first is local statute. Different states have different requirements for when new scientific knowledge must be incorporated into new products. For example, the California and Alaska Supreme Courts have held that products must conform to "reasonably scientifically knowable" information.[8] By contrast, the Colorado Supreme Court takes a stance more akin to strict liability.[9] Arizona has adopted a "knew or should have known" standard for some of its product defect cases.[10] Variation in state standards makes it impossible to generalize when a product becomes obsolete.

¶8 The second deciding factor of when new technology must be utilized is the reasoning of the finder of fact. Reasonableness, whether in design or in warning, is a question of fact.[11] While judges occasionally rule on the reasonableness of designs,[12] ideally such findings are left for the jury; judges should only step in when the evidence is so lopsided that only a mistake could account for the jury finding contrary to the evidence.[13] Because of the jury's role as a fact finder, there should never be a bright line rule concerning when a product becomes obsolete and defective. Each case needs individualized analysis.

II. CAR ALERTS AS DEFECTIVE PRODUCTS

¶9 Car alerts, like every other aspect of an automobile, can be defective. They can suffer from poor design, construction, or instructions

---

[7] *Id.* (citations omitted).
[8] Brown v. Superior Court, 751 P.2d 470 (Cal. 1988); Shanks v. Upjohn Co., 835 P.2d 1189 (Alaska 1992).
[9] *See* Belle Bonfils Memorial Blood Bank v. Hansen, 665 P.2d 118 (Colo. 1983).
[10] Powers v. Taser Int'l, Inc., 174 P.3d 777 (Ariz. Ct. App. 2007).
[11] *See* RESTATEMENT (THIRD) OF TORTS: PROD. LIAB. § 2 cmt. d (1998); *see also* Habecker v. Clark Equip. Co., 942 F.2d 210, 215 (3rd Cir. 1991).
[12] *See, e.g.*, Smith v. Louisville Ladder Corp., 237 F.3d 515 (5th Cir. 2001); *see also* GMC v. Sanchez, 997 S.W.2d 584 (Tex. 1999).
[13] Jackson v. OMI Corp., 245 F.3d 525, 528 (5th Cir. 2001).

for use. However, it is difficult to say how such devices should be judged for adequacy, since some alerts might be more effective than others.

¶10 There are many different technologies available for car alerts. Many cars include visual cues on the dashboards, such as gauges and lighted symbols, alerting a driver of the available gas, the temperature of the car, etc.[14] Sometimes, these visual cues take the form of written words, when the dashboard is equipped with a display; such displays can alert a driver in printed text that the oil needs replacing or that the weather is cold enough for ice hazards to be possible.[15] There are also auditory cues given by cars. Some cars make beeping or buzzing noises when activated, indicating the keys are still in the ignition, the car is low on fuel, or the seatbelts are not being used. While few cars use verbal cues (recorded audio voice messages) for such safety concerns, the technology is neither novel nor expensive[16] and is used extensively in automobile GPS systems.[17]

¶11 With so many alerts available, the manufacturer must decide which warning system is best. Beyond the desire to make car alerts more effective so as to prevent dangerous incidents, this question is legally important for car manufacturers. If it can be shown that a different option (say, verbal alerts) would have made the car safer or warned of a danger better than the existing alert (say, a lit symbol on the dash), then the manufacturer risks a finding of defectiveness on the entire line of vehicles.

¶12 Different people might find different warning styles to be more effective. Some people respond better to visual stimuli while others respond best to audio stimuli.[18] This would seem to relax the requirement that a warning be as effective as possible, since there is no uniformly "most effective" method of warnings. However, a reasonable alternate design or warning does not need to be proven safer every time for every person to be a legal requirement.[19] It is enough that in the totality of the evidence, the proposed alternative would make the product safer overall. If one alert is

---

[14] *See* GENERAL MOTORS CORPORATION, 2005 CHEVROLET COBALT OWNERS MANUAL 3-21 (2004).
[15] *See id.* at 3-35.
[16] *See, e.g.*, Independent Living Aids, Inc.: Digital Talking Watch with Voice and Alarm, www.independentliving.com/prodinfo.asp?number=756241 (last visited Apr. 8, 2010) (selling a talking alarm watch for the sight impaired for $5.00).
[17] *See, e.g.*, Consumer Reports: GPS Features, http://www.consumerreports.org/cro/cars/tires-auto-parts/gps/gps-buying-advice/gps-features/gps-features.htm (last visited Apr. 8, 2010) (detailing the feature of giving spoken street names when giving directions).
[18] *See generally* Felicia Lincoln, *Learning Styles of ESL Students in Community Colleges*, 30 COMMUNITY C. J. RES. & PRAC 484 (2006).
[19] Smith v. Louisville Ladder Corp., 237 F.3d 515, 531–32 (5th Cir. 2001).

shown to be less effective *generally* than another, it runs a risk of being found defective.

¶13 There are some generalizations that can be used to determine which warnings are more effective. Usually, the more specific a warning is, the easier it is to understand and weigh accurately. A light on the dash that says "CHECK ENGINE" would generally be less effective in getting a person to stop a car than a warning that says "ENGINE IS ABOUT TO EXPLODE-TURN ENGINE OFF NOW." Research shows the best way to get a person's attention, especially if he is busy with other sensory input, is to give him both a visual cue and an auditory cue.[20] From this it would seem to follow that any important alert that is merely a light or merely a beep is deficient, and can be made more effective by combining audio and visual cues and by making the meaning of the alert clearer.

¶14 However, the mark of a reasonable alternative is more than merely whether it is safer. For design defect cases, the proposed alternative must also take into account cost, desires in the marketplace, aesthetics, etc.[21] Failure to warn cases must take into account the decreased value of each warning as more warnings are added, detracting from their perceived importance.[22] If every alert had a loud audio component and bright flashing lights, alerts would become an irritant that few drivers would want. If every piece of information about a car's present condition (speed, temperature, seatbelt use, doors being opened) was scrolling across the dash and spoken through the speakers, it is possible that they would be turned off or tuned out.

¶15 Questions regarding the sufficiency of alerts are questions for the jury. These questions are questions of degree, are very fact specific, and cannot be generalized by a bright line rule. Hypothetical cases can be made which would require a ruling as a matter of law for the plaintiff and others for the defendant.[23] The existence of such hypotheticals shows that while not every case must reach a jury, there is a lot of middle room where there

---

[20] Valerio Santangelo & Charles Spence, *Multisensory Cues Capture Spatial Attention Regardless of Perceptual Load*,
33 J. EXPERIMENTAL PSYCHOL.: HUM. PERCEPTION & PERFORMANCE 1311, 1320 (2007).

[21] *See* Lindsey v. Navistar Int'l Transp. Corp., 150 F.3d 1307, 1314 (11th Cir. 1998).

[22] *See* Broussard v. Cont'l Oil Co., 433 So. 2d 354, 358 (La. Ct. App. 1983).

[23] A hypothetical case where an existing alert is proven to be zero percent effective in conveying an important safety alert and an alternative with one hundred percent effectiveness exists with no change in cost or aesthetics would be defective as a matter of law. A hypothetical where a visual alert of a five-pointed star is challenged without research, saying a six-pointed star would give the specific user a better warning, would not be defective as a matter of law.

is a reasonable debate about an alert's effectiveness. Like in traditional design defect and failure to warn cases, it rests largely on the trier of fact to say what is reasonable and what is not. This is the proper standard for automobile alert cases.

III. A FAILURE TO WARN OR A DESIGN DEFECT?

¶16 It is an important distinction to make whether insufficient warnings of this type constitute a design defect or a failure to warn. Plaintiffs are permitted to bring a claim under manufacturing and design defects simultaneously, when the evidence permits.[24] In this way, it becomes less important for a plaintiff to distinguish between the claims, allowing a jury to decide which case is stronger. However, many courts do not allow a plaintiff to submit both a design defect theory *and* a failure to warn theory to the jury using identical evidentiary support, forcing most plaintiffs to choose one theory at the outset of litigation.[25] No federal preemption issue concerning car alarms currently exists, but even without the preemption concern present with pharmaceuticals[26] and pesticides,[27] it is crucial that plaintiffs correctly identify the theory under which to bring their claim since they will only get one bite at the apple. Additionally, though the requirements of design defects and failure to warn claims are essentially identical in section 2 of the Restatement (Third) of Torts: Products Liability, they are treated differently in the comments[28] and by courts. Courts often rule as a matter of law in design defect cases, especially if not brought under a consumer expectations test.[29]

A. Insufficient audio and visual alerts as a failure to warn

¶17 At first glance, an insufficient warning system in a car seems to constitute a failure to warn. A loud beeping noise when a car is accidentally left in drive, similar to a warning in the owner's manual to "Always double check that the car is not accidentally left in drive" might induce someone to double check which gear they are in when parking. Neither audio warnings

---

[24] RESTATEMENT (THIRD) OF TORTS: PROD. LIAB. § 3 cmt. b (1998).

[25] To be clear, a plaintiff can bring both claims if they rest on different facts, such as if a product was defectively manufactured at time X and the proffered warnings given at time Y were insufficient, but the same fact cannot lead to a design defect and a failure to warn. *See, e.g.*, Brown v. Raymond Corp., 432 F.3d 640 (6th Cir. 2005).

[26] *See, e.g.*, Janssen Pharmaceutica, N.V. v. Apotex, Inc., 540 F.3d 1353 (Fed. Cir. 2008), *cert. denied*, 129 S. Ct. 1631 (2009).

[27] *See, e.g.*, Bates v. Dow Agrosciences L.L.C., 544 U.S. 431 (2005).

[28] RESTATEMENT (THIRD) OF TORTS: PROD. LIAB. § 2 cmt. i (1998).

[29] JAMES HENDERSON & AARON TWERSKI, PRODUCTS LIABILITY: PROBLEMS AND PROCESS 373 (6th ed. 2008).

nor flashing lights affect the functioning of a car; in that way, neither can be classified as functional safety features, as a guard rail or a dead-man's switch would be. Instead they are simply warnings that are conveyed as audio or visual messages in the cab of a car instead of in writing.

¶18 Potential solutions to the problem of cars slipping into reverse illuminate the difference between alerts and design changes. Such situations have caused numerous deaths and have been the subject of numerous lawsuits.[30] By not including such an alert, or by providing an insufficient alert for the risk and situation,[31] a manufacturer may be liable for failing to warn. Compare this to a design change, altering how the gear shift works, keeping the car from ever accidentally shifting into reverse.[32] Changing the gear shifting mechanism is a functional change and undoubtedly a design issue. A design change alters the way the car works while an alert does not. A design change makes a product safer in itself while an alert does not. An alert brings the consumer's attention to a risk while a change in design would be inconspicuous.

¶19 Consider the case of *Prince Alexander v. Beech Aircraft Corp.*[33] In this case, an airplane gauge incorrectly reported how much usable fuel was contained in the plane's fuel tanks. As a consequence, the plane ran out of fuel and crashed, killing and injuring its passengers. The Court of Appeals for the Tenth Circuit determined that the fuel gauge, which overestimated the available fuel, along with the instruction manual, which indicated a larger tank of available fuel, constituted a failure to warn claim and not a design defect claim. While the court limited its analysis since it determined the statute of limitations had run, the court explained that the faulty gauges, the faulty instructions, and the failure to warn of these defects were all a "failure to warn" claim, even though one aspect (the gauge) is part of the craft, one aspect (the manual) is a printed warning, and one aspect is a verbal warning.[34]

---

[30] *See, e.g.*, Gen. Motors Corp. v. Sanchez, 997 S.W.2d 584 (Tex. 1999); Humble Oil & Refining Co. v. Martin, 222 S.W.2d 995 (Tex. 1949).

[31] A light on the dashboard would be insufficient, since in such a situation the driver will certainly be exiting the car, probably in a hurry, and is unlikely to notice a light on the dashboard. A noise alert would be superior. Presumably for the same reason, many cars use a noise instead of a light for informing the driver that they are leaving their keys in the ignition or that they are leaving their headlights on.

[32] *See Gen. Motors Corp.*, 997 S.W.2d. at 589–90.

[33] 952 F.2d 1215, 1219 (10th Cir. 1991).

[34] *Id.* at 1221–22.

B. Insufficient audio and visual alerts as a design defect

¶20 There is, however, a second side to such alerts. These alerts do give warnings, but these warnings are not the same as standard, static warnings. Typical verbal or written warnings which reference general concerns that must be kept in mind throughout a products use are static, and the warning does not give any alert as to present conditions. Instead, car alerts are conditioned on a car sensor detecting a dangerous condition and subsequently alerting the driver.

¶21 Such a device, which takes readings and gives important safety information, acts similarly to a pressure or temperature gauge in an industrial machine. Such a gauge is a safety feature which does not change the operation of the machine. However, if such a gauge malfunctions, then it would likely fall under a design or manufacturing defect. Provided that adequate warning and instruction were given on the use of the gauge, the gauge is a unit which can work or fail to work, like any other manufactured unit.

¶22 In *Chohlis v. Cessna Aircraft Co.*,[35] a plane crash was caused by the plane running out of fuel. The plane had four different fuel tanks and a switch would alternate between which tank was being used at a given time. A fuel gauge would indicate the current fuel level in the tank being used. However, the auxiliary tanks burn fuel at an increased rate. The plaintiff claimed that the plane's instrument panel was designed defectively for a variety of reasons, including the lack of an indicator light to show a tank as near exhausted. While the jury ultimately determined that the cause was pilot error, the case was allowed to go to the jury under a design defect claim. The plaintiff alleged both negligence and strict liability for the design defect, and also that insufficient warnings were given as to proper use of the plane. On appeal, the appellate court affirmed, finding that the lower court had properly handed the situation off to the jury under a design defect theory and did not mention a possible failure to warn theory.

¶23 Similarly, in *McLennan v. American Eurocopter Corp.*,[36] injury was caused by a helicopter running out of fuel because of an inaccurate fuel gauge. In this case, the plaintiff seems to have become confused as to whether he wanted to bring the claim as an "unreasonably dangerous" design defect claim or a failure to warn.[37] While the court said that he would lose under either theory, it suggested that the case would have been best brought as a defective design case.[38]

---

[35] 760 F.2d 901, 903 (8th Cir. 1985).
[36] 245 F.3d 403 (5th Cir. 2001).
[37] *Id.* at 427.
[38] *Id.*

¶24 It is true that in *Prince Alexander v. Beech Aircraft Corp.*[39] the court said the claim should be viewed as a failure to warn claim and not a defect claim. However, that was not because the gauge failed to warn of the low fuel. Rather, the court reasoned that the gauge was "defective and misrepresented and overstated the amount of usable fuel to the pilot," and that the purchasers were not sufficiently warned of this problem.[40]

¶25 Looking back to *The T.J. Hooper*,[41] one can find further support that insufficient warning devices should be litigated as failed devices rather than failed warnings. The only defect of the *Hooper* was its lack of a receiving radio. Learned Hand never refers to this deficiency as a design defect or a failure to warn, merely saying it made the tugboat defective and unseaworthy.[42] However, a finding that a vessel is unseaworthy is tantamount to a finding of design defect. Seaworthiness requires a vessel, "including her equipment and crew,"[43] be "reasonably fit for the purpose for which [it] is used."[44] Examples of conditions that can render a vessel unseaworthy include defective gear, appurtenances in disrepair, insufficient manpower, unfit crew, and improper methods of loading or stowing cargo.[45] A crewmember tripping when stepping through a hatch does not give rise to a claim that a vessel is unseaworthy.[46] Neither is a ship unseaworthy because hatches are left open, allowing water to interfere with the emergency electrical unit.[47] In either of these situations, additional warnings of the inherent dangers of the boat designs might have prevented the injuries. However, neither the United States Court of Appeals for the Fifth Circuit nor the respective plaintiffs brought up failure to warn as a possible cause of a vessel being unseaworthy.[48] Presumably, if such a claim was available, the plaintiffs would have utilized it, or the court would have

---

[39] Prince Alexander v. Beech Aircraft Corp., 952 F.2d 1215, 1219 (10th Cir. 1991).
[40] *Id.*
[41] The T. J. Hooper, 60 F.2d 737 (2d Cir. 1932).
[42] *See id.* at 740.
[43] Jackson v. OMI Corp., 245 F.3d 525, 527 (5th Cir. 2001) (citing Gutierrez v. Waterman S.S. Corp., 373 U.S. 206, 215 (1963)).
[44] *In re* Matter of Hechinger, 890 F.2d 202, 207 (9th Cir. 1989) (citation omitted).
[45] Usner v. Luckenbach Overseas Corp., 400 U.S. 494, 499 (1971).
[46] *See OMI*, 245 F.3d 525, 528 (holding that the district courts finding of unseaworthiness for a lack of a handrail was clearly erroneous and that the passageway was reasonably safe for anyone using ordinary common sense).
[47] *See* Folger Coffee Co. v. Olivebank, 201 F.3d 632, 637–38 (5th Cir. 2000) (holding that hatches which may be opened or closed being habitually left open to the damage of instruments did not render the ship unseaworthy).
[48] *See OMI*, 245 F.3d 525; *Folger Coffee*, 201 F.3d 632.

likely mentioned it.[49] It stands to reason that a failure to warn theory was not available to them for proving a claim of an unseaworthy vessel.

¶26 The Supreme Court has said that the duty of a boat provider to warn is a "narrow one," consisting of only those things that the provider knows or should know of, which are "neither obvious to nor anticipated by a skilled [sailor]."[50] In *Hooper*, the weather on a given day was not known to the boat owner in advance, nor was the risk of bad weather unknown to experienced sailors. The sailors were fully aware of the risks and knew how a radio would have lessened their risks. Clearly, this is not the type of warning which the court wants boat owners to be required to make. It stands to reason, therefore, that Learned Hand meant that an ineffective alert system is a defect in the product itself, making the product unsafe for use. Such a deficiency is a design defect.

C. The continued importance of the design/warning distinction

¶27 The answer to this problem cannot be found in legislative history. No law states whether triggered alerts constitute warnings which can be insufficient, or safety devices which can be designed defectively. Nor is there a clear, judicially proscribed solution. The cases occasionally suggest that one theory is better for the situation, but never go into an analysis on why one is improper.

¶28 At first blush, the characterization of design defect versus failure to warn is nothing but a strategic choice, with no legally wrong answer.[51] However, these two theories are distinct and must remain so.

> It is sometimes said that inadequate or no warnings at all constitute—and are merely one form of—a design "defect;" and, that because knowledge of the dangerous character of a product is imputed in a strict liability design defect case it should also be imputed when the plaintiff alleges that the product is defective unless there is an accompanying warning of its dangerous character. Unfortunately, such an analysis is both overly simplistic and not warranted as a matter of policy. The initial purpose for allowing recovery under a failure to warn theory was that certain products are inherently dangerous for their intended or foreseeable uses, but these products should not be

---

[49] *E.g.*, Piercy v. Maketa, 480 F.3d 1192, 1202 (10th Cir. 2007); Capitol Park Ltd. Dividend Hous. Ass'n v. Jackson, 202 F.App'x 873, 877 (6th Cir. 2006); Overstreet v. Lexington-Fayette Urban County Gov't, 305 F.3d 566, 577 (6th Cir. 2002). In these cases, the Court addressed causes of action which might have been raised by the parties.

[50] Howlett v. Birkdale Shipping Co., 512 U.S. 92, 105 (1994).

[51] *See generally* Merrill v. Navegar, Inc., 28 P.3d 116 (Cal. 2001) (dealing with warnings and defects without emphasizing a distinction between them).

> considered unreasonably dangerous as designed because they are beneficial to society and designed as flawlessly and economically feasible as possible.[52]

¶29 The language used by both the Restatement (Third) of Torts: Products Liability and the courts creates separate causes of action for design defects and failures to warn, but uses similar language to describe the causes of action.[53] The wording of the two causes of action is similar, but this similarity suggests the importance of the distinction. The similarities show the ease by which the two theories could be combined if such a result was intended or desirable. This has not been done, and the distinction has been maintained.

¶30 Judges should not allow cases of insufficient alerts and gauges to reach the jury under the plaintiff's choice of theory. As a matter of law, deficient alerts are either insufficient warnings or a defective safety feature, not both. While the law will allow a claimant to smudge the lines between defects when the nature of the defect is unknowable,[54] this is the exception allowed to prevent injustice. The separation of defect claims into manufacturing, design, and warning allow for clearer jury instructions and the development of appropriate rules concerning each.[55]

D. Triggered alerts are safety features and their insufficiencies constitute design defects

¶31 There is a fine line between making a *product* safe to use by proper design and making a product's *use* safe by warning of the relevant dangers. A car's side mirror is a safety-oriented design feature, while the print "objects in mirror are closer than they appear" is a warning to make the mirror and the car's use safer. If the print were missing, the mirror would not become defectively designed for making objects seem far away; the mirror's very purpose is to show a wider angle of view. Likewise, mirrors which do not point in a useful direction make a car unsafe to operate, no matter how many warnings are given.

¶32 Similarly, engine temperature gauges are safety features which measure an objective fact which is salient to the driver. Improper instructions as to how to use or read the temperature gauge would not

---

[52] Nesselrode v. Executive Beechcraft, Inc., 707 S.W.2d 371, 393–94 (Mo. 1986).

[53] *See, e.g.*, Bailey v. Janssen Pharmaceutica, Inc., 288 F.App'x 597, 605–06 (11th Cir. 2008); Moyer v. United Dominion Indus., 473 F.3d 532 (3d Cir. 2007) (analyzing a claim of design defect and a claim of failure to warn as two separate claims). Cf. *Merrill*, 28 P.3d 116.

[54] *See* RESTATEMENT (THIRD) OF TORTS: PROD. LIAB. § 3 cmt. b (1998).

[55] *See generally Merrill*, 28 P.3d 116.

render a gauge defective, but would instead constitute a failure to warn. Compare this to *McLennan*.[56] In that case, the failure to warn argument was not that the faulty gauge failed to warn him about the low fuel level. Rather, his failure to warn claim rested on the manufacturer failing to warn of the inherent unreliability of the fuel gauge.[57]

¶33 If an alert in a car fails to detect the existence of an alert-worthy event (the fuel is low, the car is still in drive, the engine is overheating, etc.) then it is clearly a design defect. An item in the car's makeup was designed to judge the fuel/gear/temp and failed to do so. Assuming there is a more reliable and reasonable alternative design for the sensor, the manufacturer should be liable under the design defect rule. If the sensor acts properly but the alert itself fails to go off, then the light/sound producing part of the car is defective. While it is a "warning device," it is still making the car safer by informing the driver of the current state of the car. This diagnostic device can fail, but doing so is a product not working as intended; the device failing is not caused by a lack of instruction by the manufacturer. By contrast, if the alert goes off as intended, but the manufacturer failed to instruct the user of the meaning of the alert, then there is a failure to warn. Information such as "if the engine gauge says the car is too hot, then turn the engine off" doesn't make the car work more safely, but is crucial for the safe operation of the car.

¶34 Such an instruction, warning the customer that an alert of a hot engine means they should shut the engine off, is the exact type of warning contemplated by statute and jurisprudence. Such a warning belongs in an instruction manual, or should be told to the customer at the time of sale. Such an instruction is a warning that must only be learned once, and instructs on how to use the vehicle safely. By contrast, the alert that the car is too hot at a specific time could not be told ahead of time or sufficiently explained in an owner's manual. The driver has no way of sensing the temperature of the engine absent a sensor. This sensor is a product which the owner will rely on to inform his of the state of the car, which will then allow him to use the warnings and instructions on how to use the car appropriately.

¶35 Assume a sensor accurately assesses an emergency situation and properly gives off its visual or audio alert. Assume also that the driver was adequately instructed on the car's safety and alert systems and the seriousness with which one should take emergency alerts. However, the alert fails to get the driver's attention or fails to motivate him to the proper

---

[56] McLennan v. Am. Eurocopter Corp., 245 F.3d 403 (5th Cir. 2001).

[57] *See id.* at 432–34. In this case, the unreliability of the fuel gauge was not the relevant issue. The failure to warn claim consisted solely of the manufacturer's explanation of how to use and interpret the alert equipment. *Id.*

action (perhaps the indicator is a light with an intentionally dim bulb). This bulb and alert are not instructions, though it requires the warnings and instructions to properly interpret the alert and to know what to do. This light is a safety feature of the car intended for the purpose of alerting the driver. If this bulb, as designed, does not serve its intended purpose, it is designed defectively. Drivers cannot determine the current state of the car and therefore the car is unsafe. A dim bulb that does not motivate the driver to action is effectively the same as a sensor that does not work. While courts have held that a manufacturer is protected by a "rebuttable presumption that an adequate warning 'would have been read and heeded,'"[58] it is unreasonable to say that any warning light (including those with minimal illumination) will be noticed. The desired result of the safety system, namely to make known the state of the vehicle, has failed.

CONCLUSION

¶36 Product defect cases involving car alerts should generally be passed along to the finder of fact as with all other design defect cases. While some cases will certainly involve findings of law concerning reasonableness, the vast majority of cases should be judged by a reasonable jury. Such a claim should be restricted to a design defect theory of liability, as a failure to warn theory would ignore the purpose and capabilities of such alerts and contravene the intent of standing defect law.

[58] Eck v. Parke, Davis & Co., 256 F.3d 1013, 1019 (10th Cir. 2001) (citing Woulfe v. Eli Lilly & Co., 965 F. Supp. 1478 (E.D. Okla. 1997)).