

Hindsight Engineering

Plaintiffs' Use of Post-Sale Conduct to Show Defective Original Design

By Victor T. Van Camp

The Problem: How to Eliminate or Lessen the Harmful Effects of Evidence That a Manufacturer, Following the Sale of a Product, Engaged in a Recall, Changed the Design, Added Warnings, or Otherwise Made the Product Better or Safer.

Evidence of this type is simple and persuasive proof that a more reasonable design was capable of being adopted by the

manufacturer. Such evidence can be seen as an admission by the manufacturer that the original design was defective and can be used to support claims involving post-sale duties to warn, inform, retrofit or recall.

This problem is especially prevalent in product liability cases that involve claims of defective design pertaining to automobiles and agricultural, construction, mining, industrial and tool-making equipment. The useful life of these products is long and it is not unusual to defend a case involving a product that was manufactured many years before the incident. The design of these products is an evolutionary process that takes place over the span of many years. Each new model may contain design changes that were made based on an increase in design and engineering

expertise and advances in the state of art of design technology.

Plaintiffs and their experts often use evidence of subsequent design changes or other post-sale activity in support of their argument that the manufacturer was negligent for not previously engaging in the activity and that the product in question is defective. Plaintiffs often argue that the new design or other post-sale activity rendered the new product better and safer and that, in hindsight, the manufacturer should have adopted the new design or engaged in the post-sale conduct earlier and, further, that such earlier conduct would have prevented the plaintiff's injuries from occurring. This "hindsight engineering" is often the only way plaintiffs can criticize the design in question by using another alternative design that was feasible and reasonable.

In essence, the use of this type of evidence against manufacturers effectively penalizes the manufacturer for improving its product and results in the manufacturer's own expertise being used against it when defending an earlier manufactured product.

The Solution: Preventing Damaging Evidence of Post-sale Activity from Being Used at Trial

Limit Discovery

While discovery rules are generally liberal, there are ways to limit and control discovery so that evidence of post-sale activity is not disclosed.

- Keep discovery limited to the exact or very similar product model. Do not volunteer information regarding other models manufactured after the product at issue. Use a narrow definition of "similar" by focusing on the exact facts and claims at issue.
- Narrow the timeframe of inquiry. If the plaintiff's complaint alleges post-sale duties to warn, inform, notify or retrofit, attempt to narrow the issues by having the court dismiss those claims under state law. Then, subsequent activity regarding products manufactured years after the product in question becomes irrelevant.



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evant and not subject to discovery. Attempt to keep the focus of inquiry on the condition of the product when it was sold and the knowledge and activities of the manufacturer up to and during the time of manufacture and sale, but not after.

- Require the plaintiff to specify and narrow the theories of defect and causation early in the case. Then attempt to limit discovery to areas relevant to the plaintiff's specified theories only. This prevents fishing expeditions during discovery in cases where the plaintiff has a bad injury but no viable theory of defect or causation.

Look to the Rules

If information regarding post-sale activity is disclosed during discovery and it is anticipated plaintiff will use the information at trial, efforts should be made to prevent the information from being admitted into evidence or referred to by counsel or witnesses in front of the jury. Defense counsel should employ the use of motions *in limine* toward this end. There are several FEDERAL RULES OF EVIDENCE that apply and can be used in an attempt to exclude evidence of post-sale activity from being used at trial.

Rule of Evidence 407

FEDERAL RULE OF EVIDENCE 407 provides as follows:

RULE 407. Subsequent Remedial Measures.

When, after an injury or harm allegedly caused by an event, measures are taken that, if taken previously, would have made the injury or harm less likely to occur, evidence of the subsequent measures is not admissible to prove negligence, culpable conduct, a defect in a product, a defect in a product's design, or a need for a warning or instruction. This rule does not require the exclusion of evidence of subsequent measures when offered for another purpose, such as proving ownership, control, or feasibility of precautionary measures, if controverted, or impeachment.

RULE OF EVIDENCE 407 essentially excludes evidence of subsequent remedial measures offered to prove culpable conduct. The RULE is based on the public policy of promoting measures performed in an attempt to prevent injury-causing

events from occurring in the future. In other words, the purpose of the RULE is to encourage the taking of actions after an event occurs to lessen the likelihood of that event occurring again.

It should be remembered that RULE 407 is an *exclusionary* rule. Thus, even if the plaintiff successfully argues that RULE 407 does not exclude the evidence in question,

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the evidence is not automatically admissible into evidence. Defense counsel should still pursue arguments under other RULES OF EVIDENCE, including RULES 402 (relevance), 403 (more prejudicial than probative) and 802 (inadmissible hearsay).

Some states (Rhode Island and Maine) have repealed the traditional RULE 407 and replaced it with a RULE OF EVIDENCE that allows evidence of subsequent remedial conduct to prove negligence in connection with the event in question. In contrast, Arizona passed legislation in 1995 prohibiting plaintiffs from introducing evidence of voluntary recalls or modifications in design, warning, testing or manufacture to prove negligence, defect, strict liability or punitive damages in product liability cases. This law does not merely exclude evidence of actual remedial measures themselves, but also applies to any post-sale "self critical" analysis or action.

Issues Regarding Rule 407

What Is a Remedial Measure? Some courts have adopted a restricted view of what constitutes a remedial measure. For instance, actions taken to merely investigate an accident may not be remedial, but merely investigatory. *Rocky Mountain Helicopters, Inc. v. Bell Helicopters Textron, a division of Textron, Inc.*, 805 F.2d 907 (10th Cir. 1986); *McFarlane v. Caterpillar Inc.*, 974 F.2d 176 (D.C. Cir. 1992); *Benitez-Allende v.*

Alcan Aluminio Do Brasil, S.A., 857 F.2d 26 (1st Cir. 1988). These courts have held that true remedial measures are those taken to remedy any flaw or failure indicated by the test or investigatory report. However, the investigatory report itself is not a remedial measure without further action. *Prentiss & Carlisle v. Koehring-Waterous*, 972 F.2d 6 (1st Cir. 1992); *Dow Chemical Corp. v. Weevil-Cide Co.*, 897 F.2d 481 (10th Cir. 1990). In this instance the further action, taken after the event in question, must have been done with the purpose of making the event at issue less likely to have occurred.

Voluntary recall or retrofit campaigns, conducted after the event at issue, may be excluded from evidence under RULE 407 more easily than involuntary campaigns required by a government or other regulatory agency. *Hodder v. Goodyear Tire & Rubber Co.*, 426 N.W.2d 826 (Minn. 1988), *cert. den.*, 492 U.S. 926 (1988); *Arceneaux v. Texaco, Inc.*, 623 F.2d 924 (5th Cir. 1980), *cert. den.*, 450 U.S. 928 (1981). The reasoning of these courts is that the public policy of encouraging remedial measures does not apply to instances in which the subsequent conduct was required of the performing party. *See Chase v. General Motors Corp.*, 856 F.2d 17 (4th Cir. 1988) (NHTSA required recall performed 13 months after subject incident not excluded under RULE 407.)

Subsequent to What? The 1997 amendment to RULE 407 makes clear that the exclusionary power of the RULE only applies to actions that are performed after the occurrence that produced the damages giving rise to the litigation. Evidence of measures taken by the defendant prior to the event causing injury or harm do not fall within the exclusionary scope of RULE 407 even if they occurred after the manufacture or design of the product. *See Chase v. General Motors Corp.*, 856 F.2d 17, 21-22 (4th Cir. 1988).

In reality, the amendment to RULE 407 does not adequately protect manufacturers from having remedial measures they have taken detrimentally affect them during litigation. In fact, design changes or other measures performed by a manufacturer to make its products safer or better are rarely done in direct response to a specific injury-causing event. While the black letter application of RULE 407 would seem to limit its exclusionary powers to measures taken

in direct response to the injury-causing event at issue in the pending litigation, a more accurate application of the public policy concerns behind RULE 407 requires its application in any case where a manufacturer can show that the remedial measure in question was taken in response to a specific incident or series of incidents that occurred with its product. Otherwise, a limited application of the exclusionary powers of RULE 407 may result in a chilling effect on a manufacturer's willingness to engage in subsequent product improvement based on a product's history.

Some courts, before the 1997 amendment to RULE 407, held that the public policy concerns behind RULE 407 apply equally to measures taken before the injury-causing event at issue in the litigation, if those measures were taken subsequent to the design and manufacture of the product and otherwise satisfy the requirement of making the event less likely to occur had the measures been taken at an earlier time. *Petree v. Victor Fluid Power*, 831 F.2d 1191 (3d Cir. 1987); *Kelly v. Crown Equipment Co.*, 970 F.2d 1273 (3d Cir.1992). These courts relied on the proposition that the relevant timeframe of inquiry in a product liability case is the time of the design, manufacture and sale of the product, and that anything that occurs afterward is essentially irrelevant to the determination of whether the original design was reasonable. See *Cook v. McDonough Power Equipment, Inc.*, 720 F.2d 829 (5th Cir. 1983).

With the 1997 amendment to RULE 407, these cases have been distinguished and may no longer be good law. However, the concerns expressed by the courts in *Petree, et al.*, correctly note that the public policy of promoting remedial measures applies with equal force to measures taken in response to other "events" and not just the event at issue in the pending litigation. Why should a product manufacturer be penalized for having evidence of a remedial measure taken in response to an injury-causing event used against it at trial regarding another subsequent injury-causing event? Do not the same public policy concerns apply in either instance? If a manufacturer knows ahead of time that the contemplated measure after an injury-causing event may be eventually used against it in connection with another injury-causing event, will not

the manufacturer think twice about performing that remedial measure? Unfortunately, although legitimate, these questions may now be moot given the 1997 amendment to RULE 407, which seems to make clear that the exclusionary powers of that rule apply only to measures taken in direct response to the injury-causing event at issue in the subject litigation.

Who Is the Remediator? RULE 407 only applies to actions taken by a party. *Raymond v. Raymond Corp.*, 938 F.2d 1518 (1st Cir. 1991); *Pau v. Yosemite Park & Curry Company*, 928 F.2d 880 (9th Cir. 1991). RULE 407 does not apply, for instance, to measures taken by employers, equipment owners or others not a party in the pending litigation. Those persons/entities are not subject to liability in connection with the event at issue and, therefore, the policy consideration of encouraging remedial measures is not threatened.

Nonetheless, because the relevancy of remedial measures taken by nonparties may be outweighed by the prejudicial nature of the evidence, such evidence may be excluded pursuant to other RULES OF EVIDENCE such as RULE 402 or RULE 403. See, e.g., *Raymond v. Raymond Corp.*, *supra* at 1524; *Bingham v. Marshall & Huschart Machinery Company*, 485 N.W.2d 78 (Iowa 1992).

Exceptions to Rule 407 Exclusionary Rule

Feasibility, Ownership and Control. Evidence of subsequent remedial measures is admissible to show feasibility, ownership or control, where those issues are contested. Strong consideration should be given to stipulating to any of these matters if the issue becomes material during trial. Defense counsel should be cautious not to allow plaintiff's counsel to use one of these exceptions as a mere pretext to get damaging remedial measure evidence before the jury. In that regard, the proffered evidence must truly be probative of a permissible purpose that is actually in controversy. If, for example, control is not controverted, there is no reason to allow evidence to come in on that issue; it is not relevant, because it is cumulative in proving control. See *Howe v. Chevron USA, Inc.*, 812 F.2d 584 (10th Cir. 1987).

While ownership and control of a product are not particularly vague or ambig-

uous, the issue of feasibility can be very difficult to define and apply to the RULE 407 exception. Dictionary definitions of feasible include: capable of being done or carried out; practicable; possible. ROGET'S COLLEGE THESAURUS lists synonyms of feasible as being: practicable, possible and workable.

Courts have generally ruled that when feasibility is conceded or stipulated to, evidence of subsequent remedial measures is not admissible under the feasibility exception to RULE 407. See *Hardy v. Chemetron Corp.*, 870 F.2d 1007 (5th Cir. 1989); *Wheeler v. John Deere Company*, 867 F.2d 1404 (10th Cir.1988).

In reality, the feasibility exception to RULE 407 is rarely applicable. This is because feasibility is a weak defense where the defendant has in fact undertaken a subsequent remedial measure. In that situation, it is very difficult to argue that a suggested change (assuming it is the same change that was undertaken) was not feasible when that change was in fact made after the event at issue in the litigation. That is why most defendants concede feasibility of a suggested alternative design or other measure when that defendant has instituted the measure after the event at issue.

In that regard, generally speaking, defense counsel and experts testifying on behalf of product manufacturers should not deny that a subsequent design implemented by the manufacturer was feasible at the time the product in question was manufactured and sold. Defense counsel and experts must be extremely careful when describing why the subsequent design change was not implemented previously. Most times, the subsequent design change can be explained by describing an increase in design or engineering expertise (state-of-the-art) or a change in the knowledge that the manufacturer had about its product's use, utility or safety.

If the alternative design proffered by the plaintiff was not one later adopted by the defendant after the injury-causing event, feasibility can be admitted and the manufacturer can merely state that it decided not to adopt the alternative design because it was not as good as the design chosen by the manufacturer. Therefore, any subsequent designs or other measures taken by the manufacturer should not be allowed

into evidence because, technically, the feasibility of the plaintiff's alternative design has not been challenged.

In any event, defense counsel should always be wary of interrogatories and questions asked during the depositions of corporate representatives and experts regarding the issue of feasibility. Key words such as feasibility, possibility, probability and practicality should be highlighted and witnesses should generally not deny that subsequent design changes or other remedial measures could have been performed sooner. Otherwise, plaintiff's counsel will establish the foundation for having feasibility of a subsequent remedial measure contested, thereby implicating the feasibility exception to RULE 407.

Impeachment. Another generally recognized exception to RULE 407's exclusionary rule is for evidence of subsequent remedial measures used for impeachment purposes. Evidence admitted for this purpose is not admissible substantively for the proposition presented by the fact of the subsequent remedial measure itself, but merely to impeach or discredit the testimony of a witness, usually an expert or a corporate engineer testifying on behalf of the manufacturer. Plaintiff's counsel often attempts to get otherwise inadmissible subsequent remedial measure evidence into the record during trial and referenced in front of the jury by using the impeachment exception to RULE 407.

Defense counsel should be prepared to challenge the evidence of a subsequent remedial measure offered to impeach on the grounds that the proffered purpose is a pretext for getting otherwise inadmissible evidence into the record and mentioned in front of the jury. Courts have acknowledged that the impeachment exception to RULE 407 is prone to abuse and must be viewed and applied very carefully. See *Hardy v. Chemetron Corp.*, *supra*; *Wolf v. Proctor & Gamble Company*, 555 F. Supp. 613 (D.N.J. 1982); *Burke v. Deere & Company*, 6 F.3d 497 (8th Cir. 1993), *cert. den.*, 114 S. Ct. 1063 (1994).

In addition, the impeachment exception to RULE 407 may not apply depending on the testimony of the witness being impeached. In *Kelly v. Crown Equipment Co.*, *supra*, the court ruled that the manufacturer's expert could not be impeached with evidence of

a subsequent design change implemented by the manufacturer where the expert had merely testified that the design in question was "an excellent and proper design." *Kelly* at 1278. If, on the other hand, the expert in *Kelly* had testified that the design used by the manufacturer was the best or the only feasible one available, then the impeachment exception to RULE 407 would have

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applied and the evidence of the subsequent design change would have been admissible. *Id.* See also *Public Service Company v. Bath Iron Works Corp.*, 773 F.2d 783 (7th Cir. 1985); *Flaminio v. Honda Motor Company, Ltd.*, 733 F.2d 473 (7th Cir. 1984).

Applied in this fashion, the impeachment exception to RULE 407 cannot be employed if it is offered for simple contradiction of a defense witness's testimony. Otherwise, the impeachment exception to RULE 407 would threaten to swallow the rule itself. See *Harrison v. Sears, Roebuck & Co.*, 981 F.2d 25 (1st Cir. 1992). As in *Kelly*, *supra*, if the defense witness merely testifies that a product was safe and the subsequent remedial measure is contradictory to that testimony, but only barely so, there could be many reasons, other than a recognition of safety concerns, for the decision to change a product after an accident. In that situation, the limited probative value of the evidence for impeachment is substantially outweighed by the risk of prejudice and jury confusion and should still be excluded by the court.

Therefore, as with the feasibility exception to RULE 407, it is extremely important for defense counsel and experts to be careful when describing the design of the specific product in question. Defense counsel

and experts should not describe the design in question as being the only possible or feasible design that could have been used, nor should the chosen design be described as the safest available design. If testimony of this type is elicited from a corporate engineer or expert, that witness will be able to be impeached by using evidence of a subsequent design change. Instead, defense witnesses should merely testify that the design implemented by the manufacturer was a good, proper, safe and reasonable design. Such testimony should not open the door for evidence of subsequent design change to be admitted under the impeachment exception to RULE 407.

Rule of Evidence 402

RULE OF EVIDENCE 402 requires that evidence must be probative of a material fact before it will be admitted for consideration by the jury. Some courts have recognized that evidence of design changes or other activity by a manufacturer years after the design, manufacture and sale of the product at issue in the litigation is not relevant and is thereby inadmissible pursuant to RULE 402. These courts tend to focus on the manufacturer's knowledge and activity at the time of sale and before, but not after, as being probative of the reasonableness of the manufacturer's design choices. In cases applying strict liability, some courts have focused solely on the condition of the product when it left the manufacturer's control and have refused to judge the reasonableness of the original design by designs implemented years later, for different reasons and under different conditions.

For instance, in *Arceneaux v. Texaco, Inc.*, 623 F.2d 924 (1980), the Fifth Circuit Court of Appeals ruled that design changes made by an automobile manufacturer five years after the manufacture of the subject automobile and made in response to new federal environmental requirements were inadmissible because they were irrelevant, even though they were not subsequent remedial measures pursuant to RULE 407. The *Arceneaux* court focused on the knowledge available at the time of design and manufacture, and refused to consider evidence probative of the manufacturer's knowledge or actions subsequent to the date of manufacture and sale. *Arceneaux*, 623 F.2d at 928.

In *Stephan v. Marlin Firearms Company*, 353 F.2d 819 (2d Cir. 1965), *cert. den.*, 384 U.S. 959 (1965), the Second Circuit excluded evidence of a subsequent design as being irrelevant under RULE 402. The plaintiff attempted to use the subsequent design to show that the design of the firearm in question, manufactured years earlier, was unreasonable and defective. The court found, however, that the subsequent design was a technological improvement based on an increase in design and engineering expertise. Because the proper focus of the trial was on the reasonableness of the design of the firearm in question, and not of any new or subsequent designs, evidence of the new design was irrelevant and inadmissible. *Stephan*, 353 F.2d at 822–23. *Also see Estate of Rapp v. Clark Equipment Company*, 907 F.2d 151 (6th Cir. 1990) (unpublished opinion); (see *Automotive Litigation Reporter*, July 17, 1990 at 13,767) (evidence of subsequent design changes inadmissible where Michigan law focuses on reasonableness of manufacturer's design decisions based on information available to manufacturer at time of design, manufacture and sale).

In order to successfully argue that evidence of subsequent design activity is inadmissible under RULE 402, it must be shown that the proper focus of inquiry should be on the manufacturer's knowledge and activities at the time of the original design, manufacture and sale, rather than on knowledge and activities years later. The success of this argument will depend heavily upon the substantive law of the particular state in which the case is pending. States employing a risk/utility balancing test regarding the reasonableness of a particular design will be more likely to focus solely on the state of manufacturer's knowledge and activities at the time of design, manufacture and sale, and will be less likely to allow evidence of subsequent design activities to be considered and admitted into evidence. On the other hand, states recognizing post-sale duties to warn, recall, retrofit or repair may allow evidence of post-manufacture and sale activity, and an argument for exclusion under RULE 402 may not be as successful.

Rule of Evidence 403

RULE OF EVIDENCE 403 provides for the exclusion of evidence whose probative value

is substantially outweighed by the danger of unfair prejudice, confusion of the issues, misleading of the jury or other considerations such as undue waste of time, etc. RULE 403 has been applied by courts to exclude evidence of subsequent design changes or other activity where the evidence was found to be overly prejudicial or lead to a confusion of the issues and misleading

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of the jury. *See, e.g., Raymond v. Raymond Corp.*, *supra*; *Jordan v. General Motors Corp.*, 624 F. Supp. 72 (E.D. La. 1985).

An argument to exclude evidence of subsequent remedial measures under RULE 403 should be used in conjunction with arguments under Rules 402 and 407. The policy concerns implicit in all of these rules are the same: evidence of subsequent activity is minimally probative of the reasonableness of a manufacturer's original design decisions and is far outweighed by the prejudicial effect of the evidence.

Rule of Evidence 802

When evidence of a subsequent remedial measure taken by a nonparty is not excluded under RULE 407, such evidence may be excluded under RULE 802 as hearsay. As defined in RULE OF EVIDENCE 801, hearsay may be nonverbal conduct of a person or entity if the nonverbal conduct is intended as an assertion. When a plaintiff offers evidence of a subsequent remedial measure taken by a nonparty as proof of that nonparty's belief that the subsequent change is better or safer than the original design and that the original design is thereby unreasonable and/or defective, such evidence is hearsay and inadmissible

pursuant to RULE 802. *See Tulkku v. Mackworth Rees*, 257 N.W.2d 128 (Mich. 1977).

Damage Control: What to Do If Evidence of Post-sale Activity Cannot Be Excluded at Trial

In many instances, for various reasons, evidence of subsequent remedial measures or other post-sale activity by the defendant manufacturer cannot be excluded from evidence during trial. In such a situation, it is imperative that defense counsel anticipate beforehand whether the evidence will be excluded or admitted, and formulate a strategy regarding how to use and/or combat the evidence.

If it becomes clear that the evidence of post-sale activity will be admitted at the time of trial, defense counsel should consider addressing the evidence during *voir dire* and in opening statement. Admitting and addressing a weakness in the defense case (if the evidence of post-sale activity is in fact a weakness) will only help add to the credibility of the manufacturer and defense counsel. In addition, an early explanation regarding the evidence will hopefully allow the jury to consider both sides of the story from the beginning of the trial, rather than have a one-sided, biased view of the evidence favorable to the plaintiff.

When explaining the reasons for subsequent activity by the manufacturer, it is important that all witnesses and defense counsel are consistent and cohesive in their explanation. Inconsistencies regarding reasons why certain post-sale decisions were made will only serve to make the evidence more damaging and could lead to situations where otherwise inadmissible evidence becomes available for impeachment purposes.

There are certainly some instances in which post-sale activity by a manufacturer will come into evidence and is not damaging, but is instead evidence that can be used to show the manufacturer is a concerned company always striving to make its products the best and safest it can. In these instances, the manufacturer may want to use the evidence affirmatively as proof of the ongoing degree of care and reasonableness that it uses in designing its products. Whenever faced with evidence of post-sale activity, defense counsel and witnesses tes-

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tifying on behalf of a manufacturer should appear proud of the post-sale measures taken while at the same time being careful not to appear critical of prior designs or decisions.

Conclusion

Use of “hindsight engineering” by a plaintiff in a product liability case can present serious problems for a product manufac-

turer. A plaintiff’s use of the manufacturer’s subsequent design changes or other activity is often the plaintiff’s most damaging evidence against the manufacturer. Steps should be taken from the beginning of the lawsuit to properly limit discovery to issues pertinent only to the original design and, later, to have evidence of post-sale activity excluded at trial under appropriate RULES OF EVIDENCE. In any instance, however, a product manufacturer cannot

be afraid or hesitant to engage in product improvements because of the concern that those actions may later be used against it in litigation. Proper and judicious use of the RULES OF EVIDENCE and case law can help lessen the potentially harmful effects of the manufacturer’s interest in improving its products and using previously unavailable state-of-the-art methods and technology to do so. 