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publication in the New York Reports.  
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No. 36  
Lori Hoover, et al.,  
                    Respondents,  
                    v.  
New Holland North America, Inc.,  
&c., et al.,  
                    Appellants,  
et al.,  
                    Defendants.  
(And a Third-Party Action.)

                    Paul F. Jones, for appellants.  
                    John A. Collins, for respondents Hoover and Bowers.  
                    Joseph A. Matteliano, for third-party respondent  
Andrews.  
                    Product Liability Advisory Council, Inc., amicus  
curiae.

ABDUS-SALAAM, J.:

                    Plaintiff-respondent Jessica Bowers sustained severe  
injuries when she was caught and dragged into the rotating

driveline of a tractor-driven post hole digger distributed by defendant-appellant CNH America LLC (CNH) and sold by defendant-appellant Niagara Frontier Equipment Sales, Inc. (Niagara) (collectively, defendants). Prior to the accident, Peter Smith, the owner of the post hole digger, removed a plastic safety shield from the machine after years of use had left the shield damaged beyond repair. The main issue presented on this appeal is whether defendants were entitled to summary judgment dismissing plaintiff's design defect claims based on the substantial modification defense articulated in Robinson v Reed-Prentice Division of Package Machinery Company (49 NY2d 471 [1980]). We conclude that, on this record, plaintiff raised triable issues of fact concerning the defective design of the safety shield that were sufficient to defeat summary judgment based on substantial modification.

I.

A Model 906 HD post hole digger (the digger) is an agricultural implement manufactured by Alamo/SMC Corporation (SMC) that is designed, as its name implies, to dig holes in the ground for posts. The digger is tractor-driven and has a driveline that connects at one end to the tractor's power take-off (PTO), allowing the digger to draw power from the tractor's engine. The other end of the driveline terminates at a universal joint (U-joint) with two yokes, one of which attaches to the input shaft of the digger's gearbox. A collar around the U-joint

yoke is secured to the gearbox input shaft using a bolt that extends through both the collar and the input shaft, and is fastened by a nut. The bolt head and nut are not recessed, but instead protrude beyond the yoke collar's outer surface.

The digger is operated via controls near the tractor seat. When the digger is engaged, the PTO rotates the driveline, transmitting power to the gearbox that, in turn, rotates a spiral auger that extends downward from an output shaft at the bottom of the gearbox into the ground. The rotating driveline articulates vertically as the auger moves up and down to bore post holes.

The digger comes equipped with several safety guards and shields, including a bell-shaped plastic shield manufactured by GKN Walterscheid (GKN) that is bolted to the gearbox. This shield, which is made of durable high-density polyethylene, covers the gearbox input shaft and most of the U-joint, including the protruding nut and bolt. The digger's operating manual provides numerous safety warnings about keeping all the digger's safety shields in place, and several safety decals on the digger itself give warnings, including "DANGER! SHIELD MISSING DO NOT OPERATE!" and "KEEP ALL SHIELDS IN PLACE AND IN GOOD CONDITION."

On October 1, 2004, plaintiff's stepfather, former third-party defendant Gary Hoover (Gary), borrowed the digger and a tractor from Smith, a family friend and grape farmer. Gary was not aware when he borrowed the digger that Smith had previously removed the safety shield from the gearbox and never replaced it.

The following day, Gary was using the digger to dig holes for a backyard fence at his home. Gary operated the digger from the tractor seat and he initially had plaintiff's mother, plaintiff Lori Hoover (Lori), assist him by holding the gearbox, which steadied the auger so that it dug a straight hole. Lori would step away from the digger before Gary initialized the drilling. They dug five holes using this method until Lori had to go to work.

Gary subsequently asked plaintiff to assist him with the digger. Plaintiff, then 16 years old, had never seen, used, or assisted in the operation of a post hole digger. Gary had plaintiff, who at the time was wearing a tank top, pajama bottoms, flip flops, and a jacket, perform the same task as Lori; she held the gearbox to steady the auger before Gary commenced drilling from the tractor seat. While Gary was operating the digger, plaintiff's jacket caught in the rotating driveline, dragging her into the machine. By the time Gary disengaged the digger, plaintiff's jacket and hair were wrapped around the driveline over the protruding nut and bolt at the U-joint connection. Smith later observed, as he unwound plaintiff's jacket from the driveline, that its lower pocket had caught on the protruding nut. Plaintiff's right arm was severed above the elbow; she also sustained fractures to her left scapula, left clavicle, and right humerus.

Plaintiff commenced this products liability action<sup>1</sup> against defendants, SMC, GKN, and the component maker NEAPCO, Inc., asserting causes of action sounding in negligence and strict products liability for manufacturing defect, design defect, and failure to warn, among other claims. Plaintiff brought a separate negligence action against Smith, and CNH and GKN commenced third-party actions against Gary seeking indemnification and contribution.<sup>2</sup> These actions were consolidated prior to trial.

At his deposition, Smith testified that he purchased the digger in 1996 to dig holes for trellis posts in his vineyard. When Smith used the digger, the shield and driveline would at times contact the ground. This contact would occur, according to Smith, when he drilled holes for end posts, and when under certain soil conditions, the auger would "suck" into the ground inadvertently, pulling the driveline, gearbox, and the shield down despite efforts to stop it. End post holes needed to be dug deeper and at a quicker pace than regular post holes; to accomplish this, Smith would position the digger at about a 60-degree angle to the ground and submerge the entire auger and part

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<sup>1</sup> The action was commenced by both plaintiff and Lori; however, Lori discontinued her individual claims during the course of trial and is not a party on this appeal.

<sup>2</sup> Gary died during the pendency of the action, and Kyle P. Andrews, the Niagara County Treasurer, was substituted as third-party defendant in his capacity as Temporary Administrator of Gary's estate.

of the gearbox assembly into the ground. At the time of the accident, Smith did not know that the manual instructed operators not to submerge the auger beyond the flighting (i.e., the spiral blade on the auger shaft) because, as stated in the manual, "this will cause binding and overloading." The manual does not warn, however, that the gearbox safety shield could become damaged if it contacts the ground.

Smith testified that, two to three years after he purchased the digger, the safety shield "got broke up and tore off" due to regular "wear and tear." Each time the shield "broke off," Smith would reattach it to the gearbox using a succession of larger washers beneath the bolt heads. After about four years of use, Smith (or one of his employees) removed the broken shield from the digger when "[i]t finally got to the point where [the shield] . . . wasn't going to stay on anymore." Smith estimated that he used the digger to install 1,000 to 2,000 posts per year before removing the shield, and that five to 10 percent of those were end posts.<sup>3</sup>

Prior to plaintiff's accident, Smith replaced certain parts on the digger as they became worn out, including the auger. Smith testified that he did not replace the shield before the accident because it was "only going to get bent up, broke up, and tore off again." Smith was aware that the shield was intended to

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<sup>3</sup> Smith testified that he threw the broken shield away after he removed it; it was not made available for inspection by defendants.

provide protection from rotating components near the gearbox, and in June 2005, he replaced the shield "[p]robably because of the accident." Smith purchased the new shield from Niagara for \$40 and installed it in about 15 to 30 minutes using tools in his toolbox.

The parties also deposed several engineers employed by the various defendants. These witnesses opined that the safety shield was not intended to be removed because it fully protected against the entanglement hazard posed by the rotating components near the gearbox, and that the digger was not intended to be operated without the shield in place. SMC engineering manager David Horrman testified that the expected life of a safety shield "depends on the condition it's subjected to"; "if it's in an abusive situation, those guards [or shields] can become damaged and they should be immediately replaced once they're damaged." Horrman further testified that the digger's safety shields are intended to be "replaced when they become damaged or worn," and that replacement should be part of "the normal routine maintenance of the [digger]." CNH engineers Stephen Schlotterbeck and John Riffanacht agreed that a safety shield should last the life of the machine on which it is installed provided it is not "abused." Riffanacht further opined that it would be a "misuse" to operate the digger without all of the shields installed, and that a farmer should replace a shield if it becomes broken. SMC agricultural engineer Kermit Hillman

acknowledged, however, that it was "always a possibility" that a user would remove a shield from the digger and not reattach it.

Hillman testified that the prototype post hole digger CNH provided to SMC employed a metal shield around the gearbox. SMC abandoned that design, however, after CNH's service department reported that the metal shield could cause damage to other parts of the digger. SMC never tested the metal shield to see if this reported problem existed and instead went with a plastic shield because it was "fairly durable and . . . flexible."

The plastic shield did not sustain any damage during field testing SMC conducted under the supervision of Hillman and Schlotterbeck, among others. These witnesses testified that SMC never tested whether the shield could withstand contact with the ground because this was not expected to occur during "normal operation" of the digger when the machine is "adjusted correctly." Schlotterbeck stated that he did not observe any "abusive testing" that involved the shield contacting the ground, but admitted that such contact was a "possibility." Hillman testified that the shield could "inadvertently contact the ground" and stated that this did, in fact, "happen on occasion" during SMC's field testing. Although SMC was aware of this potential pitfall, according to Hillman, it did not conduct field tests to determine how many times the shield could contact the ground before becoming damaged; perform any specific durability

testing of the shield; or ask GKN what, if any, tests it had performed on the shield. GKN agricultural engineer Nolan House testified that GKN conducted two tests on the shield: a "cold impact test," in which the shield was frozen and hit one time with a weight, and a "side-load test," in which the shield was pushed one time with 270 pounds of force. GKN did not conduct any tests involving the shield contacting the ground.

Following discovery, all defendants moved for summary judgment. Relevant to this appeal, defendants argued that, under Robinson, they could not be held liable as a matter of law because Smith made post-sale modifications to the digger that rendered the digger defective and proximately caused plaintiff's injuries. Defendants asserted that the digger was safe when it was sold to Smith and that he made the product dangerous by, according to his own testimony, removing the shield and failing to replace it. According to defendants, the deposition testimony established that Smith "misused" the digger by regularly allowing the shield to contact the ground, and that he "abused" the machine by using it with such high frequency on his vineyard. Defendants argued that it had no duty "to furnish a machine that cannot be abused or that will not wear out," and that it was inexcusable that Smith failed to spend the small amount of time and expense necessary to replace the shield before the accident.

Plaintiff opposed summary judgment, arguing that the digger incorporated two design defects that were substantial

causes of her injuries: the protruding nut and bolt at the U-joint connection and the plastic shield. Plaintiff asserted that the substantial modification defense did not bar her claims because, according to Smith's testimony, he removed a broken plastic shield that had been destroyed from normal use of the digger, rather than a functioning safety device that could have protected plaintiff from injury. Plaintiff also noted that Smith testified that he did not replace the shield because it was only going to break again, and that his alleged "abuse" of the digger merely involved using the machine for its intended purpose. The testimony from the various engineers, plaintiff asserted, raised additional questions of fact concerning whether Smith's conduct was foreseeable and whether the shield was defectively designed.

In opposition to the motion, plaintiff submitted an affidavit by Thomas Berry, a mechanical engineer, who opined that the digger was defective on account of both the protruding nut and bolt and the plastic shield. Regarding the shield, Berry averred that, under accepted engineering principals, any safety shield affixed to a farming implement must "be designed to last the life of the product considering the foreseeable use and misuse of the product and its use within the environment." The plastic shield used on the digger was "inadequately tested" and "not reasonably safe," according to Berry, because it failed after two to three years of "normal use," during which it was foreseeable that the shield would contact the ground and become

damaged. Berry also believed it was foreseeable that the average farmer would not replace a broken shield and that this reality should have prompted SMC to implement an alternative design. Berry posited that, instead of the plastic shield, the digger could have been designed and manufactured with "an integral guard" that, if removed, would render the digger inoperable, or a "rugged steel shield" that would last the life of the digger. Neither of these design alternatives, Berry averred, would have impaired the functionality of the digger or significantly increased its cost of production. Berry concluded that the failure to incorporate one of these alternative designs proximately caused plaintiff's injuries.<sup>4</sup>

Supreme Court granted summary judgment to the extent of dismissing plaintiff's manufacturing defect and failure to warn claims,<sup>5</sup> but denied summary judgment with regard to the design defect claims asserted against defendants, SMC, GKN, and NEAPCO. The court also denied Smith's motion for summary judgment in its

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<sup>4</sup> Berry further opined that, "[f]rom an engineering viewpoint," the digger could have been designed so that it "eliminated the protruding nut and bolt" at the U-joint connection "without impairing the function of the product and without any substantial increase in cost." Specifically, the digger could have incorporated a "non-protruding design" such as "a slide collar or a snap collar" similar to the one used on the tractor end of the driveline.

<sup>5</sup> Supreme Court also dismissed strict product liability and negligence claims plaintiff alleged against defendants related to the tractor Gary borrowed from Smith. Plaintiff did not appeal from these dismissals.

entirety. The case then proceeded to a jury trial in March 2011. On the third day of trial, Smith, SMC, GKN, and NEAPCO settled with plaintiff and the trial thereafter continued against defendants on the design defect claims.

During the four-week trial, plaintiff presented both the nut-and-bolt and the safety shield design defect theories to the jury, who heard testimony from, among other witnesses, plaintiff, Smith, Berry, and many of the engineering experts deposed during discovery. Before dismissing the jury for deliberations, the trial judge charged the jurors on substantial modification, stating that if they found that Smith's removal of the shield and failure to replace it resulted in a substantial modification of the digger that was a substantial factor in causing plaintiff's injuries, then they must "consider that in determining whether CHN and/or Niagara Frontier are liable."

The jury returned a verdict in favor of plaintiff in the amount of \$8,811,587.29 and apportioned liability as follows: 35% to CNH, 30% to SMC, 30% to Smith, 3% to Gary Hoover, and 2% to Niagara. Defendants moved for, among other things, judgment notwithstanding the verdict and, in the alternative, to set aside the verdict of the jury as against the weight of the evidence. The court denied the motion and entered judgment for plaintiff. Defendants appealed.

The Appellate Division affirmed (see Hoover v New Holland N. Am., Inc., 100 AD3d 1495 [4th Dept 2012]). The court

concluded that, even assuming defendants "met their initial burden on their motion for summary judgment," plaintiff "submitted sufficient evidence to defeat that motion and on their direct case at trial to make out a prima facie case of defective design of the digger" (*id.* at 1497). Specifically, plaintiff "presented sufficient evidence that the digger was defectively designed" and "that Smith's removal of the damaged gearbox shield did not constitute a substantial modification" (*id.*). The court also "reject[ed] [defendants'] contentions that the proof was insufficient to establish that the defective design of the digger was a substantial factor in causing plaintiff's injuries or that an alternative design would have prevented the accident" (*id.*).<sup>6</sup> This Court granted defendants leave to appeal and we now affirm.

II.

Where a plaintiff is injured as a result of a defectively designed product, the product manufacturer or others in the chain of distribution may be held strictly liable for those injuries (*see Sprung v MTR Ravensburg*, 99 NY2d 468, 472-473 [2003]; *Sage v Fairchild-Swearingen Corp.*, 70 NY2d 579, 585 [1987]; *see also Speller v Sears, Roebuck & Co.*, 100 NY2d 38, 41 [2003]). "[A] defectively designed product is one which, at the time it leaves the seller's hands, is in a condition not

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<sup>6</sup> The Appellate Division also denied plaintiff's cross appeal from the judgment and, in a separate order issued the same day, dismissed defendants' appeal from the Supreme Court order denying their post-trial motion.

reasonably contemplated by the ultimate consumer and is unreasonably dangerous for its intended use," and "whose utility does not outweigh the danger inherent in its introduction into the stream of commerce" (Voss v Black & Decker Mfg. Co., 59 NY2d 102, 107 [1983]; Robinson, 49 NY2d at 479). To establish a prima facie case for design defect, the plaintiff must show that the defendant "breached its duty to market safe products when it marketed a product designed so that it was not reasonably safe and that the defective design was a substantial factor in causing plaintiff's injury" (Voss, 59 NY2d at 106-107; see Adams v Genie Indus., Inc., 14 NY3d 535, 542 [2010]). A plaintiff who carries this burden may prevail regardless of whether the injury resulted when the defectively designed product was "used for its intended purpose or for an unintended but reasonably foreseeable purpose" (Lugo v LJN Toys, 75 NY2d 850, 852 [1990], citing Micallef v Miehle Co., 39 NY2d 376, 385-386 [1978] [additional citation omitted]). "The issue of whether a product is defectively designed such that its utility does not outweigh its inherent danger is generally one 'for the jury to decide in light of all the evidence presented by both the plaintiff and defendant'" (Yun Tung Chow v Reckitt & Colman, Inc., 17 NY3d 29, 33 [2011], quoting Voss, 59 NY2d at 108 [internal alterations omitted]).

It is well settled, however, "that a manufacturer, who has designed and produced a safe product, will not be liable for injuries resulting from substantial alterations or modifications

of the product by a third party which render the product defective or otherwise unsafe" (Amatulli v Delhi Constr. Corp., 77 NY2d 525, 532 [1991], citing Robinson, 49 NY2d at 479; see Liriano v Hobart Corp., 92 NY2d 232, 238 [1998]). We explained in Robinson that, "while the manufacturer is under a nondelegable duty to design and produce a product that is not defective," that duty is "not an open-ended one" (49 NY2d at 479, 481). Rather, it is measured "as of the time the product leaves the manufacturer's hands" and extends only "to the design and manufacture of a finished product which is safe at the time of sale" (id. at 481). Thus, manufacturers and others in the distribution chain are "not required to insure that subsequent owners and users will not adapt the product to their own unique uses. That kind of obligation is much too broad and would effectively impose liability . . . for all product-related injuries" (Liriano, 92 NY2d at 238, citing Robinson, 49 NY2d at 480-481; see also Amatulli, 77 NY2d at 532).

Defendants argue that they were entitled to summary judgment based on the substantial modification defense we described in Robinson. In that case, the plaintiff, a plastic molding machine operator, was seriously injured when his hand was caught in a machine his employer had modified by cutting a hole in its safety gate. The plaintiff sued the defendant-manufacturer in strict products liability and negligence, alleging that the machine was defectively designed. Although the

plaintiff prevailed at trial, we dismissed both causes of action on appeal. Addressing the strict liability claim, we held that "[s]ubstantial modifications of a product from its original condition by a third party which render a safe product defective are not the responsibility of the manufacturer" (id. at 479). The plaintiff did not "premise liability on any defect in the design or manufacture of the machine" and instead urged that the defendant should be held liable because his employer's act of "destroying the functional utility of the safety gate" was "foreseeable" (id. at 480). We rejected this theory, concluding that

"[p]rinciples of foreseeability . . . are inapposite where a third party affirmatively abuses a product by consciously bypassing built-in safety features. While it may be foreseeable that an employer will abuse a product to meet its own self-imposed production needs, responsibility for that willful choice may not fall on the manufacturer"

(id.). Because the plaintiff made no "showing that there was some defect in the design of the safety gate at the time the machine left" the manufacturer's control, the defendant could not "be cast in damages for strict products liability" (id.).

The Court also rejected the plaintiff's claim that the defendant was negligent in its design of the machine (see id.). Acknowledging the established rule that a manufacturer must "use reasonable care in designing the product when 'used in the manner for which the product was intended as well as unintended yet

reasonably foreseeable use,'" (id., quoting Micallef, 39 NY2d at 385-386 [internal alterations omitted]), we determined that this duty "does not extend to designing a product that is impossible to abuse or one whose safety features may not be circumvented" (id. at 480-481). Thus, while "[a] cause of action in negligence will lie where it can be shown that a manufacturer was responsible for a defect that caused injury, and that the manufacturer could have foreseen the injury" (id. at 480), "[m]aterial alterations at the hands of a third party which work a substantial change in the condition in which the product was sold by destroying the functional utility of a key safety feature, however foreseeable that modification may have been, are not within the ambit of a manufacturer's responsibility" (id. at 481).

A defendant moving for summary judgment based on substantial modification must establish entitlement to that defense "sufficiently to warrant the court as a matter of law in directing judgment" in its favor (CPLR 3212 [b]; see Green v Kautex Machs., 159 AD2d 945, 946 [1990]). Primarily, the defendant must make the same showing required to prevail on any design defect claim: that the product was "not defective" at the time it was manufactured and sold (Robinson, 49 NY2d at 479; see e.g. Voss, 59 NY2d at 108 [the defendant must show "that the product is a safe product"])). Once this threshold showing has been made, the defendant must demonstrate that a post-sale

modification rendered the otherwise "safe product defective" and that the modification was the proximate cause of the plaintiff's injuries (Robinson, 49 NY2d at 479).

If the defendant establishes prima facie entitlement to summary judgment based on substantial modification, the burden shifts to the plaintiff to come forward with evidentiary proof in admissible form demonstrating "the existence of material issues of fact which require a trial of the action" (Vega v Restani Construction Corp., 18 NY3d 499, 503 [2012]; see Zuckerman v City of New York, 49 NY2d 557, 562 [1980]). The plaintiff may overcome a substantial modification defense by demonstrating that the post-sale modification did not render a "safe product defective" because the product incorporated a defectively designed safety feature at the time of sale (Robinson, 49 NY2d at 479; see Voss, 59 NY2d at 108). In other words, the plaintiff must raise a triable issue of fact whether the safety feature "was not reasonably safe and that the defective design was a substantial factor in causing plaintiff's injury" (Voss, 59 NY2d at 106-107).<sup>7</sup>

This summary judgment standard comports with our reasoning in Robinson. We concluded in Robinson that, where a

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<sup>7</sup> Of course, this is not the only way that a plaintiff may defeat summary judgment based on substantial modification. We have stated that a plaintiff will prevail, for example, by showing that "a product is purposefully manufactured to permit its use without a safety feature" (Liriano, 92 NY2d at 938, citing Lopez v Precision Papers, 67 NY2d 871 [1986]).

third party makes post-sale modifications that destroy the functional utility of the product's safety feature, the manufacturer will be insulated from liability absent a showing that "there was some defect in the design of the safety [feature] at the time" the product left the manufacturer's hands (Robinson, 49 NY2d at 480). The plaintiff in Robinson did not demonstrate that the safety gate on the molding machine was defectively designed; rather, the evidence indicated that the machine was "safe at the time of sale" and that "[h]ad the machine been left intact, the safety gate . . . would have rendered th[e] tragic industrial accident an impossibility" (id. at 480-481). Dismissal of the plaintiff's design defect claim was therefore appropriate.

It follows under Robinson that if a plaintiff establishes the existence of material issues of fact concerning the defective design of a safety feature, the defendant will not automatically prevail on summary judgment simply because that safety feature was modified post sale. The substantial modification defense is intended to insulate manufacturers and others in the distribution chain from liability for injuries that would never have arisen *but for* the post-sale modification of a safety feature on an otherwise safe product. Robinson does not, however, mandate summary disposal of cases where the plaintiff raises a colorable claim that the product was dangerous because of a defectively designed safety feature and *notwithstanding* the

modification by the third party.

We agree with the Appellate Division that, on this record, plaintiff established the existence of material issues of fact sufficient to overcome defendants' substantial modification defense. Smith testified that the shield he removed had been destroyed by years of "wear and tear," would no longer stay attached to the digger, and, essentially, had ceased to provide protection from the rotating components near the gearbox. Unlike the employer in Robinson, Smith did not modify the digger in order to "circumvent[]" the utility of the shield or to "adapt" the digger to suit his own needs (49 NY2d at 481). Rather, Smith removed the shield because its "functional utility" had already been destroyed (id.), and his testimony raised a question of fact whether removal of the broken shield was to blame for plaintiff's injuries. Plaintiff also proffered Berry's expert affidavit, in which the engineer averred that the shield was "not reasonably safe" because it was not "designed to last the life" of the digger, and that defendants' failure to incorporate a safer yet feasible alternative design, such as an integral guard or metal shield, was "a substantial factor" in causing plaintiff's injuries. While we do not necessarily agree, as plaintiff contends, that no safety device is reasonably safe unless it is designed to last the lifetime of the product on which it is installed, defendants did not adequately refute plaintiff's assertions that the plastic shield failed prematurely under the

circumstances presented here.

Defendants argue, as they did on summary judgment, that the shield was not defectively designed but was damaged when Smith "misused" the digger by allowing it to contact the ground during drilling. This may have been a viable theory if defendants had demonstrated that Smith's alleged "misuse" was unforeseeable as a matter of law (see e.g. Micallef, 39 NY2d at 385-386). As it stands, however, plaintiff presented sufficient evidence to rebut this claim and bring it before the jury.<sup>8</sup> Although several engineers testified that the shield should not contact the ground during "normal operation" of the digger, Berry stated in his affidavit that this contact was "foreseeable" during "normal use," and that more robust durability testing would have revealed that a plastic shield would not hold up under

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<sup>8</sup> The dissent suggests that our holding conflicts with Robinson because the manufacturer there avoided liability even though "the misuse" in that case (i.e., the modification of the safety gate on the plastic molding machine) "was not only foreseeable -- it was in fact foreseen" (dissenting op, at 4). But the only "misuse" at issue in Robinson was the substantial modification of the safety gate. We are not departing from our holding in Robinson that a manufacturer may not be held responsible for substantial modifications that "destroy[] the functional utility of a key safety feature," no matter how foreseeable those modifications may have been (49 NY2d at 481). Although foreseeability is not relevant to the substantial modification of a safety device, it is relevant to defendants' claim here that Smith's "misuse" in driving the shield into the ground was a proximate cause of plaintiff's injuries, rather than any defect in design (see id. at 480). To prevail on this point on summary judgment, defendants had to prove, as a matter of law, that Smith's misuse of the digger was unforeseeable. They did not meet that standard here.

these circumstances. Indeed, the record indicates that the shield underwent limited durability testing, none of which included contact with the ground. According to Hillman, SMC was aware that the shield could hit the ground during drilling and still declined to test the shield for durability under these or any other circumstances. Schlotterbeck disagreed that the shield ever touched the ground during testing, but he admitted that such contact was a "possibility" and that the shield was not tested for that use. Viewed in the light most favorable to plaintiff, this evidence was sufficient to raise a question of fact whether the shield was defective at the time of sale (see Robinson, 49 NY2d at 479).

The closer question is whether Smith's failure to replace the broken shield constitutes a substantial modification freeing defendants of liability. Both parties agree that plaintiff would not have been injured if an intact shield had been in place on the date of the accident. Defendants urge that the owner of a machine is responsible for replacing all parts that become damaged or worn, including safety devices, and that a contrary rule would place an onerous burden on manufacturers to design accident-proof products that are incapable of wearing out. A manufacturer is not obligated to design a machine that will never deteriorate or wear out (see Auld v Sears, Roebuck & Co., 26 AD 918 [2d Dept 1941], affd 288 NY 515 [1942]), and the owner does bear the responsibility of maintaining the machine by, among

other things, "having it inspected periodically so that worn parts may be replaced" (Mayorga v Reed-Prentice Packaging Mach. Co., 238 AD2d 483, 484 [2d Dept 1997]; see Aparicio v Acme Am. Repair, Inc., 33 AD3d 480, 481 [1st Dept 2006]). However, where the plaintiff raises questions of fact whether the machine incorporated a defective safety device, the manufacturer or others in the distribution chain cannot *automatically* avoid liability on the basis that the safety device was removed post sale and not replaced. Such a broad rule would lessen the manufacturer's duty to design effective safety devices that make products safe for their intended purpose and "unintended yet reasonably foreseeable use" (Micallef, 39 NY2d at 385-386; see Lugo, 75 NY2d at 852).

On this record, defendants did not demonstrate their entitlement to summary judgment based on Smith's failure to replace the broken safety shield. Particularly, the expert evidence raised a question whether Smith's failure to replace the shield alone caused plaintiff's injuries, or whether his failure pointed to a failure on defendants' part in selling and distributing the digger with a defectively designed shield. Horrman testified that owners should replace "worn or damaged" shields as part of "normal routine maintenance" of the digger; Riffanacht agreed and added that operating the digger without all of the shields installed was a "misuse" of the machine. Hillman admitted, however, that it was possible that an owner would not

replace a broken shield, and Berry determined that the digger should have incorporated a shield that accounted for this "foreseeable" event.

Additionally, Smith testified that he did not replace the shield before the accident because it was "only going to get bent up, broke up, and tore off again." This testimony was sufficient to raise a question whether, because of its allegedly defective design, the shield would have repeatedly broken and required replacement by Smith, and defendants failed to adequately refute this material issue. Although owners are obligated to keep their products in good repair (see e.g. Mayorqa, 238 AD2d at 484), they should not be required to continually replace defective safety components even if, as here, the components could be replaced easily and cheaply. Thus, defendants could not succeed on summary judgment merely because Smith testified that a new shield cost \$40 and took no more than 30 minutes to install, or because Smith had previously replaced other worn-out components on the digger. Although this evidence could support a jury finding of liability against Smith, it would be inappropriate to award summary judgment to defendants on this basis given the issues of fact regarding the shield's allegedly defective design.

This may have been a different case if defendants had established as a matter of law that the shield was reasonably designed yet expected to wear and require replacement prior to

the accident. Instead, defendants merely contended that Smith "abused" the digger and suggested that the shield needed replacement because Smith drilled 1,000 to 2,000 post holes a year in the approximately four-year period before he removed the shield. As we have explained, plaintiff raised a question of fact whether Smith's habit of driving the shield into the ground was foreseeable. Moreover, defendants did not demonstrate that Smith used the digger with such frequency that it could qualify as "abuse." Using the digger to drill thousands of post holes per year appears to fall squarely within the intended use of that product, and nothing in the record conclusively shows at what point a properly designed shield would be expected to wear out and require replacement under these circumstances. To the contrary, two CNH engineers opined that a safety shield should last the lifetime of the product absent abuse. Without definitive evidence that such "abuse" occurred here, defendants could not prevail on summary judgment based on Smith's failure to replace the shield.

Defendants argue that foreseeability is not a factor under the substantial modification defense, and therefore, they should not be faulted for failing to anticipate that Smith would "affirmatively abuse" the digger by removing the shield and not installing a new one (Robinson, 49 NY2d at 480). Robinson made clear, however, that although the manufacturer's responsibilities "do[] not extend to designing a product that is impossible to

abuse or one whose safety features may not be circumvented," it must still "use reasonable care" in designing the product that is reasonably safe for all of its intended uses and foreseeable misuses (id. at 480-481; see Micallef, 39 NY2d at 385-386). Plaintiff defeated summary judgment here not because defendants failed to foresee that Smith would "abuse" the shield, but because plaintiff's evidence in opposition raised questions of fact whether, because the shield was defectively designed, Smith's conduct could even qualify as an "abuse" of that safety device under Robinson.

We have emphasized that the issue of whether a product is defectively designed is often one "for the jury to decide" (Voss, 59 NY2d at 108; see Yun Tung Chow, 17 NY3d at 33). Here, the courts below properly determined that, on this record, plaintiff raised material issues of fact sufficient to bring her design defect claims and defendants' substantial modification defense before the jury.

III.

Defendants raise several additional arguments, none of which are meritorious. Briefly, we agree with the Appellate Division that the evidence, considered as a whole, supports the jury's determinations that the digger was defectively designed because it incorporated a protruding nut and bolt and/or a plastic shield, and that either or both of these design defects were a substantial factor in causing plaintiff's injuries (see

Adams, 14 NY3d at 544; see also Lolik v Big V Supermarkets, Inc., 86 NY2d 744, 746 [1995]). There was also a valid line of reasoning to support the jury's finding that, although Smith was negligent, his removal and failure to replace the shield did not absolve defendants of liability based on substantial modification (see generally Cohen v Hallmark Cards, 45 NY2d 493, 499 [1978]). We further find that the trial court's jury instruction on substantial modification was appropriate, particularly when considered in the context of the charge as a whole. We have considered defendants' remaining contentions and find them unavailing.

IV.

Accordingly, the order of the Appellate Division should be affirmed, with costs.

SMITH, J. (dissenting):

A designer designed a machine. He tried his best to make it safe, but, among the many decisions that go into any such effort, he made two that were questionable: he provided for a nut and bolt to fasten certain components, resulting in a protrusion where there might otherwise have been a smooth surface; and he chose a plastic, rather than a metal, safety shield. Arguments can be (and are) made that both these decisions were correct, but the arguments are not conclusive, and a jury could find that the designer was negligent. No one claims that these decisions were intended to or did save the manufacturer money. They were honest mistakes, at worst.

A farmer bought the machine. It came with safety decals warning in large letters against operation without a safety shield ("DANGER: GUARD MISSING DO NOT OPERATE"; "DANGER: . . . CONTACT CAN CAUSE DEATH . . . DO NOT OPERATE WITHOUT . . . ALL DRIVELINE, TRACTOR AND EQUIPMENT SHIELDS IN PLACE"). The decals are illustrated with a simple drawing of what could happen if they are disregarded; the drawing looks like a grim foreshadowing of Jessica Bowers's accident. The machine also came with an operator's manual, containing several similar

warnings (e.g., "Never operate machinery without all shields"). The manual also told the operator, "**IMPORTANT:** *Do not allow the auger to penetrate the ground to a depth where the flighting [a helical blade] is submerged.*"

The farmer ignored all these warnings. He routinely submerged the flighting and kept drilling, with the result that the safety shield was pressed against the ground again and again. After three or four years, the shield was so damaged that it seemed to be useless, so the farmer took it off and threw it away. He chose not to get a replacement shield -- which would have cost \$40 and taken no more than half an hour to install -- because "it's only going to get bent up and broke again." Evidently, another few years of having a safety shield was not worth the expense and trouble.

Imagine for a moment that the designer and the farmer had equally deep pockets. Would anyone hesitate for a moment in saying that the farmer, not the designer, should compensate Jessica Bowers for her injuries? But of course pockets are not equally deep, and it should surprise no one that a jury assigned two-thirds of the fault to the companies that designed, manufactured and sold the machine -- firms that could be liable only for the alleged design defects -- and 30% to the farmer, Peter Smith. This kind of soak-the-rich fact-finding is commonplace in American tort law. The legal system has never found a way to prevent it, but it has devised some rules that

help to weed out its more extreme forms.

One such rule is the "substantial modification" rule of Robinson v Reed-Prentice Div. of Package Mach. Co. (49 NY2d 471, 475 [1980]):

"[A] manufacturer of a product may not be cast in damages, either on a strict products liability or negligence cause of action, where, after the product leaves the possession and control of the manufacturer, there is a subsequent modification which substantially alters the product and is the proximate cause of plaintiff's injuries."

Could it be more obvious that this rule applies to this case?

The majority opinion seems to me an exercise in avoiding the obvious.

The majority suggests that Robinson is distinguishable because the product here, unlike the product there, was not "safe at the time of sale" (majority op at 19, quoting Robinson, 49 NY2d at 481). But the post-hole digger in this case was safe at the time of sale in the simple sense that, while the safety shield remained in place, it could not have caused Jessica Bowers's accident (see majority op at 22: "Both parties agree that plaintiff would not have been injured if an intact shield had been in place on the date of the accident"). And the safety shield would have remained in place if Smith had not battered it into uselessness, thrown it away and not bothered to replace it.

The majority seems to suggest that the Robinson rule should apply only where the misuse of a product is "unforeseeable as a matter of law" (majority op at 21). But the misuse in

Robinson itself was not only foreseeable -- it was in fact foreseen. The manufacturer of the plastic molding machine involved in Robinson "knew precisely what its customer was doing to the safety gate and refused to modify its design" (49 NY2d at 478). That did not make the manufacturer liable. We said: "Principles of foreseeability . . . are inapposite where a third party affirmatively abuses a product by consciously bypassing built-in safety features" (id. at 480).

Ultimately, the majority seems to say that Robinson does not apply because the design of the machine here could have been found negligent (see majority op at 25). But no plaintiff can prevail in a design defect case without showing negligence. If the Robinson rule protected only non-negligent manufacturers, it would be meaningless. The majority relies on our statement in Robinson "that a manufacturer is under a duty to use reasonable care in designing his product when used in a manner for which the product was intended . . . as well as an unintended yet reasonably foreseeable use" (49 NY2d at 480, citation and internal quotation marks omitted). But, as the majority acknowledges, we qualified this statement by saying: "The manufacturer's duty . . . does not extend . . . to designing a product that is impossible to abuse or one whose safety features may not be circumvented" (id. at 480-481).

The point of our statements in Robinson is clear in context: a manufacturer's duty is to use reasonable care to

design a product that is safe at the time it leaves the manufacturer's hands. A manufacturer is not liable for dangers created by substantial alterations to the product thereafter. That principle should control this case.

\* \* \* \* \*

Order affirmed, with costs. Opinion by Judge Abdus-Salaam. Chief Judge Lippman and Judges Graffeo, Read, Pigott and Rivera concur. Judge Smith dissents and votes to reverse in an opinion.

Decided April 1, 2014