

IN THE SUPREME COURT OF MISSISSIPPI

No. 2007-CA-01153

MIKE TOWNSEND

Appellant

vs.

**DOOSAN INFRACORE AMERICA CORPORATION, F/K/A DAEWOO HEAVY
INDUSTRIES AMERICA CORPORATION**

Appellee

**Appeal of the Final Judgment of the Hinds County Circuit Court, First Judicial District,
Honorable W. Swan Yerger Circuit Judge in Cause No. 251-01-1059CIV**

BRIEF OF APPELLEE

**DOOSAN INFRACORE AMERICA CORPORATION, F/K/A DAEWOO HEAVY
INDUSTRIES AMERICA CORPORATION**

ORAL ARGUMENT IS NOT REQUESTED

LeAnn W. Nealey, MB # [REDACTED]
Robert A. Miller, MB [REDACTED]
Michael E. McWilliams, ME [REDACTED]
BUTLER, SNOW, O'MARA, STEVENS &
CANNADA, PLLC
P. O. Box 22567
Jackson, MS 39225
Tel: 601-985-5711
Fax: 601-985-4500

Michael H. Bai (bar roll [REDACTED])
Littleton Joyce Ughetta Park & Kelly LLP
39 Broadway, 34th Floor
New York, NY 10006
Direct: (212) 404-5775
Tel: (212) 404-5777
Fax: (212) 232-0088

ATTORNEYS FOR APPELLEE


**DOOSAN INFRACORE AMERICA CORPORATION, F/K/A DAEWOO HEAVY
INDUSTRIES AMERICA CORPORATION**

CERTIFICATE OF INTERESTED PERSONS

The undersigned counsel of record for Doosan Infracore America Corporation, f/k/a Daewoo Heavy Industries America Corporation certifies that the following listed persons have an interest in the outcome of this case. These representations are made in order that the justices of the Supreme Court and/or judges of the Court of Appeals may evaluate possible disqualification or recusal.

1. Mike Townsend – Appellant
2. Doosan Infracore America Corporation, f/k/a Daewoo Heavy Industries America Corporation - Appellee
3. John F. Hawkins, Esq; John P. Scanlon, Esq.; Hawkins, Stracener & Gibson, PLLC – Attorneys for Appellant Mike Townsend
4. John Griffin Jones, Esq., Jones Funderburg, Sessums, Peterson & Lee – Attorney for Appellant Mike Townsend
5. Robert A. Miller, Esq., Michael E. McWilliams, Esq., LeAnn W. Nealey, Esq., Butler, Snow, O'Mara, Stevens & Cannada, PLLC – Attorneys for Appellee
6. Michael H. Bai, Esq., Littleton Joyce Ughetta Park & Kelly LLP – Attorney for Appellee
7. James Holland, Esq., Pelecia Everatt Hall, Esq., Page, Kruger & Holland, P.A. – Attorneys for Burke Handling Systems, Inc.
8. Bridgette Thomas, Esq., Markow Walker – Attorney for Intervenor, St. Paul Fire and Marine Insurance Company
9. Honorable W. Swan Yerger, Hinds County Trial Court Judge.

So certified this the 14th day of March, 2008.



LeAnn W. Nealey
Counsel for Appellee,
Doosan Infracore America Corporation, F/K/A
Daewoo Heavy Industries America Corporation

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STATEMENT OF ISSUES

- I. The trial court, after full briefing and oral argument, excluded the opinions and testimony of Townsend's sole expert, Thomas Berry, based on insufficient supporting facts and data and lack of reliability under Miss. R. Evid. 702 and *Daubert/McLemore*. Can Townsend demonstrate that the trial court's decision was so "arbitrary and clearly erroneous" that it constituted an "abuse of discretion" in this case?
- II. Based upon any ground sufficient to sustain the judgment below, can summary judgment in Doosan's favor be affirmed in this case?

STATEMENT REGARDING ORAL ARGUMENT

Given the straightforward application of the law to the facts of this case, Appellee Doosan believes that oral argument is not necessary.

STATEMENT OF THE CASE

A. Nature of the Case.

1. Overview of Townsend's Appeal and Underlying Products Liability Design Defect Claim Against Doosan.

Appellant/Plaintiff Mike Townsend appeals the trial court's dismissal of his forklift truck design defect lawsuit against Appellee/Defendant Doosan. After full briefing and oral argument, the trial court excluded the opinions and testimony of Townsend's sole expert under Miss. R. Evid. 702 and *Daubert/McLemore*. Because Townsend was then left without competent proof to support his design defect claims, the trial court granted summary judgment in Doosan's favor.

Townsend's underlying forklift design defect claims¹ against Doosan arose when Townsend was operating a sit down, gasoline-powered Daewoo G25S forklift truck (D.R.E.² 1; R. 483) on an elevated and slightly sloped (R. 628) loading dock at his employer's premises. R. 8-9. In deposition, Townsend testified the forklift he was operating nudged a hand cart left on the dock, which began to roll towards the edge of the loading dock. Townsend testified that he quickly stopped the forklift, placed the transmission in neutral, and exited the forklift in order to catch the cart. D.R.E. 5; R. 667-68 (pp. 85-89). When Townsend then turned back to the forklift, it was moving towards the loading dock's edge. As he attempted to halt the machine, one of its wheels went over the edge, and Townsend and the forklift fell off the dock into the loading area below, resulting in Townsend's injuries. D.R.E. 5; R. 667-70 (pp. 85-99).

¹ Townsend raised failure to warn/inadequate warnings claims against Doosan in his complaint, but subsequently dropped these claims, admitting in his briefing in the trial court that "[his expert, Mr. Berry,] testified that adequate or better warnings would not have prevented the injury in this case." R. 719, quoting Plaintiff's Mem. at 2. The trial court specifically recognized in its Opinion and Order that these claims were no longer at issue in this case. T.R.E. 5; R. 748 ("as reflected in the parties' briefing, as well as joint representations during the December 11, 2006 hearing, there remains no issue of failure to warn or inadequate warnings."). In turn, though Doosan showed in the court below Mr. Berry's lack of qualifications to opine with respect to warnings (R. 226-27), these arguments are moot here given Townsend's decision not to pursue his warnings claims.

² "D.R.E." indicates Doosan's record excerpts; "T.R.E." indicates Townsend's record excerpts.

To support his design defect claims against Doosan under the Mississippi Product Liability Act, Miss. Code Ann. § 11-1-63, Townsend retained a professional engineer, Thomas Berry, to opine on the alleged defective design of the subject forklift truck.

Because Mr. Berry's opinions were not based upon sufficient facts or data; or upon reliable principles and methodology, Doosan moved to exclude and/or strike the testimony and opinions of Mr. Berry. R. 244-353. Doosan simultaneously sought entry of summary judgment in its favor based on Townsend's inability to offer any proof whatsoever in support of his design defect claim in the event Mr. Berry's opinions were excluded. *Id.* Even if Mr. Berry's opinions were allowed in whole or in part, Doosan also sought summary judgment based on Townsend's failure to establish in any way that (i) the forklift "failed to function as expected" under the facts of this case; and (ii) because Townsend's claims against Doosan were pre-empted by federal law. *Id.*

2. The Proceedings and Disposition of the Case in the Court Below.

Doosan fully briefed the issues stated above in support of its motion to exclude and for summary judgment (R. 223-43); and furnished the trial court with the supporting exhibits. R. 244-353. Townsend responded and furnished the trial court with additional exhibits supporting his response. R. 456-713. Doosan filed a reply brief (R. 718-26), and supplemented the record with additional information in support of its motion. R. 732-43.

On December 11, 2006, the trial court conducted a hearing in open court³ on Doosan's motion to exclude Mr. Berry and on Doosan's motion for summary judgment. After consideration of Doosan's motion (and exhibits); Townsend's response (and exhibits); all supplementations; full briefing of the parties; and after hearing oral argument (T.R.E. 4 (p. 1); R. 744), the trial court granted Doosan's motion to exclude the testimony and opinions of Mr. Berry

³ The hearing was not transcribed.

and for summary judgment. The trial court detailed the basis for its determinations in its Opinion and Order (T.R.E. 5; R. 746-50) and issued a Final Judgment under Miss. R. Civ. P. 54(b). T.R.E. 4; R. 744-45. In particular, the trial court found that Mr. Berry's testimony and opinions should be excluded "based upon his failure to meet the evidentiary standards and requirements of Miss. R. Evid. 702, *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993) and *Mississippi Transportation Commission v. McLemore*, 863 So. 2d 31 (Miss. 2003)." T.R.E. 5 (p. 1); R. 746. Based on the resulting "absence of competent expert evidence," the trial court also found that Townsend "failed to demonstrate a genuine issue of material fact on his claims against Doosan;" and granted summary judgment in Doosan's favor. T.R.E. 5 (p. 4); R. 749.

B. Statement of Facts

1. The January 17, 2000 Incident.

This case arises from a January 17, 2000 incident at Central Pipe Supply, Inc., in Pearl, Mississippi. Townsend, an employee at Central Pipe, was operating the subject forklift truck on a loading dock on the premises. R. 8-9. Townsend testified in deposition that he was operating the forklift and carrying a load when he was bumped into a hand cart located on the dock, which began to roll towards the edge of the loading dock. D.R.E. 5; R. 667-68 (pp. 85-89).

Upon seeing the rolling hand cart, Townsend testified that he stopped the forklift, "put the shift lever in neutral," and quickly exited the forklift in order to catch the cart. D.R.E. 5; R. 668 (p. 91). He felt the gear shift click into the neutral location. D.R.E. 5; R. 670-71 (pp. 100-01).

Townsend also testified that he had no recollection of striking the gear shift lever while exiting the subject forklift:

Q. Did you ever touch the lever with your right hand at all as you left the forklift?

- A. Not that I'm aware of. No, sir, I do not recollect that.
- Q. All right. Did any other part of your body touch the lever, to your knowledge, before you got out of the forklift?
- A. Not to my knowledge.

D.R.E. 5; R. 671 (p. 101); *see also* D.R.E. 5; R. 672 (p. 106). Later in his deposition, Townsend declared, "I am unaware of me doing that [hitting the gear shift lever]. I don't feel like I did." D.R.E. 5; R. 694 (p. 193). A handwritten notation on that page of his deposition (apparently written by Townsend) added, "If I had[,] it would have driven out from under me while exiting the machine!"⁴ Indeed, Mr. Berry's own description of the accident in his expert report does not even state that Townsend bumped the gear shift lever into forward (D.R.E. 3; R. 568 (pp. 87-89); *see* D.R.E. 2; R. 479); nor does Townsend's Complaint. R. 7-16.

In exiting the forklift truck, Townsend omitted several required safe practices. Although he neutralized the forklift's transmission (D.R.E. 5; R. 668 (p. 91)), Townsend failed to follow any of the other practices required under the forklift's Operations Manual for safe operation and likewise recommended by his own expert, Mr. Berry.⁵ Townsend left the engine running (D.R.E. 5; R. 671 (p. 102), R. 680 (p. 139)); and did **not** lower the forks (D.R.E. 5; R. 680 (p. 138)); or engage the parking brake. D.R.E. 5; R. 680 (p. 137); R. 456. Indeed, Townsend admits that setting the parking brake was not his practice, even in non-emergency situations. D.R.E. 5; R. 671 (p. 102-03).

The warnings accompanying the forklift explicitly cautioned the operator to lower the forks; engage the parking brake; and turn off the engine, as well as set the gear shift to neutral when parking the forklift truck. R. 345; D.R.E. 3; R. 570 (pp. 96-97). Townsend's expert, Mr. Berry, explained in deposition that these safe practices should be followed; and acknowledged

⁴ Though there is no errata sheet attached to Mr. Townsend's deposition (Exhibit G to his Response to Doosan's Motion (R. 646-95)), what are apparently his handwritten comments are found throughout this copy of his deposition. *See, e.g.*, D.R.E. 5; R. 683 (pp. 149, 150, 151), R. 688 (p. 172).

⁵ *See, e.g.*, D.R.E. 3; R. 570 (pp. 96-97); R. 345.

that the **only** practice Townsend followed was neutralizing the transmission. D.R.E. 3; R. 570 (pp. 94-97).

These practices are also endorsed by the American Society of Mechanical Engineers under the safety standards applicable to the forklift truck under American National Standard for Powered Industrial Trucks, Part II, ANSI B56.1-1993:

5.2.11 Before leaving the operator's position: (a) bring truck to a complete stop; (b) place directional controls in neutral; (c) apply the parking brake; (d) lower load-engaging means fully. . . . In addition, when leaving the truck unattended: (e) stop the engine or turn off the controls. . . .

APP 3; *see also* APP 1, 29 C.F.R. 1910.178 (m)(5)(iii) and (m)(7).

After exiting the forklift, Townsend grabbed and stopped the cart he had bumped. When Townsend turned back to the forklift, he testified that it was moving towards the loading dock edge. As he attempted to halt the machine, one of its wheels went over the edge, and Townsend and the forklift fell off the dock into the loading area below, resulting in Townsend's injuries. D.R.E. 5; R. 668-70 (pp. 91-99).

2. The Forklift Functioned As Designed.

Townsend's expert, Mr. Berry, testified that when he inspected the forklift at Central Pipe on February 8, 2001, the forklift truck functioned as designed (D.R.E. 3; R. 562 (p. 64)) and there is no evidence it functioned otherwise at the time of the January 17, 2000 incident. Mr. Berry admits that the subject forklift complied with the applicable safety standards under ANSI B56.1 (D.R.E. 3; R. 574 (pp. 111-12); D.R.E. 4; R. 632-33); and repeatedly acknowledged that **had** Townsend set the parking brake, the accident would not have occurred. D.R.E. 3; R. 570 (pp. 94-95)); D.R.E. 4; R. 623; 627; 630-31; 639. Townsend, likewise, admitted the accident would not have happened had he set the parking brake (D.R.E. 5; R. 680 (p. 138)); and acknowledged that it was "probable" it would not have happened had he "turned off the [forklift]

engine" or lowered the forks. D.R.E. 5; R. 680 (p. 138-139).⁶

3. Mr. Berry's Expert Testimony and Opinions.

As noted above, Townsend retained Mr. Berry as an expert to provide his opinions in support of Townsend's design defect claim against Doosan under Mississippi's Product Liability Act, Miss Code Ann. § 11-1-63. Mr. Berry proposes two design defect theories, which he derived in order to explain the forklift's movement toward the edge of the loading dock. First, Mr. Berry determined that "[t]he F-N-R shift lever does not lock in neutral and can easily be bumped into engagement." D.R.E. 2; R. 480. He supports this opinion with the only "testing" he undertook in this case; namely his "hip bump" test in which he attempted to engage the forklift's gear shift by brushing against it with his rear end or hip upon exiting the forklift. *See, e.g.*, D.R.E. 3; R. 563-65 (pp. 69, 73-74). He also performed a videotaped "finger-flick" test⁷ in which he carefully maneuvers the gear shift lever, precariously balances it at the threshold of the neutral detent; then "flicks" the lever in an attempt to show that it "can easily be bumped into engagement." D.R.E. 2; R. 480; *see* R. 337.⁸

Second, Mr. Berry offered a design alternative (D.R.E. 4; R. 635) based on an Operator Presence System (OPS) as follows:

The forklift should have been designed with an Operator Presence System (OPS) that would automatically neutralize the transmission any time that the operator was not seated on the machine.

⁶ ANSI B56.1-1993 (APP 3), applicable to forklift trucks, provides that whenever a forklift truck is "unattended" the operator should "stop the engine." § 5.2.11(e). "Unattended" under this standard means "whenever the operator leaves the truck and it is not in his view" (§ 5.2.10), which was apparently the situation in this case.

⁷ The videotape which includes the "finger-flick" test is included in the record in a separate manila envelope. R. 337.

⁸ Because the irrelevancy of the "finger-flick" test and the blatant inadequacy of both tests directly relate to the reasons for excluding Mr. Berry's testimony, the details of these "tests" are addressed within the "Law and Argument" section below.

D.R.E. 2; R. 481. Because it is undisputed that Townsend neutralized the transmission when he exited the forklift (D.R.E. 5; R. 670 (p. 100)); this design alternative would only come into play if the gear shift was bumped into forward. As such, Mr. Berry's OPS alternative design (like his design defect theory based on the forklift's gear shift design), is likewise premised on the "testing" described above. See Appellant's Brief at 13.

SUMMARY OF THE ARGUMENT

To prevail on appeal, Townsend must show that the trial judge's decision to exclude the opinions and testimony of his sole expert, Thomas Berry, was so "arbitrary and clearly erroneous" that it constituted an "abuse of discretion" in this case. *Mississippi Transp. Commission v. McLemore*, 863 So. 2d 31, 34 (Miss. 2003). Townsend has no basis for doing so. On the contrary, after full briefing and oral argument, the trial judge correctly determined that Mr. Berry was not qualified to testify under Miss. R. Evid. 702 and *Daubert/McLemore* standards.

This is so for a number of reasons, beginning with the overriding problem with both of Mr. Berry's design defect opinions: they are dependent upon facts not in evidence. Mr. Berry opines that the forklift is defective because (i) the forklift's shift lever could be easily bumped into gear; or because (ii) it lacks an operator presence system that would have "automatically neutralize[d] the transmission" when Townsend left the seat. But both theories are only relevant if the forklift's gear shift lever was actually bumped into forward.⁹ There is no proof in this case, however, that Townsend actually bumped the gear shift lever into forward while exiting; or that it was in forward at anytime after Townsend left the forklift seat.

⁹ Because it is undisputed that Townsend had already neutralized the transmission when he got off the forklift (D.R.E. 5; R. 670 (p. 100)); the OPS design alternative would only come into play if the gear shift was bumped into forward.

Indeed, Townsend does not believe he bumped the gear shift lever -- and the allegations of his Complaint likewise show Townsend's original theory encompassed no such "inadvertent bump" sending the forklift's gear shift into forward. On the contrary, Townsend's Complaint describes the subject forklift as defective due to "unexplained and unintentioned (sic) movement into gear out of neutral causing the truck to move forward or in reverse." R. 12. Having no proof of any kind supporting that postulation, Mr. Berry proceeded to different, and equally unsubstantiated, theories of powered movement to explain away the obvious -- that the forklift truck simply rolled off the edge of the dock after Townsend failed to set the parking brake. Because Mr. Berry's opinions are dependent upon an external force being applied to the gear shift lever to move it from neutral to forward; he was forced to create a way in which this could have happened. He attempts to do so through his "hip bump" and "finger-flick" tests. This "testing" (the only testing Mr. Berry performed), is the basis for the remaining reasons why the trial court properly excluded his opinions and testimony in this case.

As an initial matter, Mr. Berry admits he has never given an opinion on accident reconstruction -- but that is precisely what he attempted to do here by devising some way to show how the gear shift lever could have gone into forward. Townsend maintains Mr. Berry's theories (and the "testing" he did to support them) are valid; but Mr. Berry admits that he did no independent investigation or personal interviews regarding the subject incident in this case. Mr. Berry's "inspection" of the forklift truck and the accident scene was similarly lacking; he did not measure the air pressure in the tires of the forklift truck; determine the forklift truck's idle speed; or measure the dock's length, width or height; and he took only one slope measurement at the entire site.

Despite his failure to determine key "facts and data" relating to the accident, Mr. Berry then proceeded to perform his "hip bump" and "finger-flick" tests in an effort to demonstrate

how the gear shift lever could have been bumped into forward. These “tests” are the crux of Mr. Berry’s design defect opinions -- but his “finger-flick” test is wholly irrelevant to the facts of this case; and both tests completely fail to meet the “reliability” or “general acceptance” standards under Miss. R. Evid. 702 and *Daubert/McLemore*.

As to his “hip bump” test, Mr. Berry performed the test just twice -- and of those two times, the gear shift only engaged once. He did the testing himself, not using someone of Townsend’s similar size and shape; and performed it without the engine running (though Townsend testified he left the forklift running on the day of the accident); and without knowing the position of the adjustable seat on the day of the accident. The only force measurements Mr. Berry took were taken in the optimal directions that would result in the least amount of force having to be applied to move the gear shift lever. In short, Mr. Berry wholly failed to adequately record, analyze, or employ any reasoning or proper methodology in conducting this test.

Though likewise unreliable, the chief problem with Mr. Berry’s “finger-flick” test is that it is simply irrelevant. A plain viewing of the video tape of this “test” shows how precariously he balances the gear shift lever at the threshold of the neutral detent, then “flicks” the lever, attempting to show it can be bumped into engagement. As detailed below, Mr. Berry, himself, admits that the gear shift lever could not be “perched” in a false neutral position and shift into gear on its own; instead, an external force on the lever is required. But there is no evidence that Townsend failed to place the gear shift lever in its fully detented neutral position when he exited the forklift. On the contrary, Townsend felt the lever click into neutral. Because Mr. Berry’s “finger-flick” test starts at the point where he has already manipulated the gear shift lever from its fully detented neutral position, his “test” has no relevancy here.

Nor does Mr. Berry’s testimony meet any other *Daubert/McLemore* factors helpful in assessing its “reliability.” There is no evidence that the relevant engineering community

generally accepts or promotes Mr. Berry's "testing" methods or that his "testing" was peer-reviewed. The high potential rate of error associated with his "hip bump" test and the "finger-flick" test is apparent. He simply had no scientific controls, standards or guidelines in performing these tests.

Because the opinions and testimony of Townsend's sole expert were properly excluded; Townsend was left without competent proof supporting his design defect claims. Summary judgment in Doosan's favor, therefore, was warranted. Even if this Court finds Mr. Berry should not have been excluded as an expert, summary judgment in Doosan's favor may also be granted because Townsend has no proof that the forklift "failed to function as expected" -- a key element of his design defect claim. Townsend and his expert knew that setting the parking brake would have prevented the accident -- but Townsend did not set it. There is no design defect where a product "functions as expected" and an accident occurs based on a party's failure to use that product as designed. *See Clark v. Brass Eagle, Inc.*, 866 So. 2d 456, 461 (Miss. 2004); *Glenn v. Overhead Door Corp.*, 935 So. 2d 1074, 1081-83 (Miss. Ct. App. 2006).

Finally, because the subject forklift truck complied with federal standards, Townsend's design defect claims under state law are pre-empted and summary judgment should be granted in Doosan's favor on this additional basis.

LAW AND ARGUMENT

A. Standard of Review

The exclusion of an expert witness for failure to meet the requisite standards under Miss. R. Evid. 702 may be "employed [by the trial court] as one of the grounds for granting summary judgment." *Hubbard v. Wansley*, 954 So. 2d 951, 956 (Miss. 2007). Though "this Court applies a de novo standard of review to the grant or denial of summary judgment by a trial court" (*id.* citing *Leffler v. Sharp*, 891 So. 2d 152, 156 (Miss.2004)); the Court is bound by an "abuse of

discretion” standard in “reviewing the trial court’s decision to allow or disallow . . . expert testimony.” *Webb v. Braswell*, 930 So. 2d 387, 397 (Miss. 2006), citing *McLemore*, 863 So. at 34 (decision must be “arbitrary and clearly erroneous” to constitute “abuse of discretion”). “Such discretion deserves equal respect at the summary judgment stage and the trial stage.” *Lyons v. Biloxi H.M.A., Inc.*, 925 So. 2d 151, 154 (Miss. Ct. App. 2006) (citation omitted); see *Webb*, 930 So. 2d at 397 (excluding proffered expert on future profits where testimony failed “reliability” prong of the *Daubert/McLemore* test and granting partial summary judgment dismissing any claims based on unplanted crops); *Hubbard*, 954 So. 2d at 956 (excluding unqualified physician at summary judgment stage).

Additionally, as Appellee, Doosan “is entitled to argue and rely upon any ground sufficient to sustain the judgment below.” *Hickox v. Holleman*, 502 So. 2d 626, 635 (Miss. 1987). Doosan will thus address all grounds upon which this Court, sitting in appellate review, may affirm the trial court’s exclusion of Mr. Berry’s opinions and testimony and its granting of summary judgment in Doosan’s favor.

B. Mr. Berry’s Testimony and Opinions Were Properly Excluded Under Miss. R. Evid. 702 and the *Daubert/McLemore* Standard.

1. The Evidentiary Standard Under Miss. R. Evid. 702 and *Daubert/McLemore*.

Rule 702 of the Mississippi Rules of Evidence reads as follows:

If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise, if (1) the testimony is based upon sufficient facts or data, (2) the testimony is the product of reliable principles and methods, and (3) the witness has applied the principles and methods reliably to the facts of the case.

In 2003 this Court overturned its longstanding adherence to the *Frye*¹⁰ "general acceptance" analysis in favor of the *Daubert* standard "for assessing the reliability and admissibility of expert testimony." *McLemore*, 863 So. 2d at 39, citing *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579, 597 (1993). The trial court's gatekeeping responsibility under Rule 702 and *Daubert/McLemore* is to determine whether the evidence "both rests on a reliable foundation and is relevant to the task at hand" (*id.*) -- a responsibility conscientiously upheld by the trial court in this case.

Regarding Rule 702's requirements, any purported expert testimony must first be found to "assist the trier of fact to understand the evidence or to determine a fact in issue." Expert evidence that is irrelevant in proving the proponent's case is properly excluded under this prong of Miss. R. Evid. 702.¹¹

Secondly, Rule 702 requires that the proposed expert be "qualified;" and mandates that the expert's testimony be "based upon sufficient facts or data." Speculative opinions will not suffice.¹² Instead, the Court must decide whether the expert's testimony has a "traceable, analytical basis in objective fact." *Bragdon v. Abbott*, 524 U.S. 624, 653 (1998). "Opinion evidence that is connected to existing data only by the *ipse dixit* of the expert" should not be admitted. *Kumho Tire Co., Ltd. v. Carmichael*, 526 U.S. 137, 157 (1999).

Finally, the expert's proposed testimony must be "reliable." See Miss. R. Evid. 702(2) and (3). In this regard, the test for reliability is "flexible," and the trial court may, but need not,

¹⁰ *Frye v. U.S.*, 293 F. 1013 (D.C. Cir. 1923).

¹¹ See *Lentz v. State*, 604 So. 2d 243, 246-47 (Miss. 1992); *Hafstienn v. BMW of North America, LLC*, 194 Fed. Appx. 209, 212-213, 2006 WL 2381900, 2-3 (5th Cir. 2006).

¹² See *Dedeaux Utility Co., Inc. v. City of Gulfport*, 938 So. 2d 838, 843 (Miss. 2006); *Webb v. Braswell*, 930 So. 2d 387, 398 (Miss. 2006); *Brooks v. Stone Architecture, P.A.* 934 So. 2d 350, 355 (Miss. Ct. App. 2006); *Fresenius Medical Care and Continental Cas. Co. v. Woolfolk ex rel. Woolfolk*, 920 So. 2d 1024, 1032 (Miss. Ct. App. 2005); *Gilbert v. Ireland*, 949 So. 2d 784, 791 (Miss. Ct. App. 2006).

consider the specific factors identified in *Daubert* (1) whether the theory or technique can be (and has been) tested; (2) whether the theory or technique has been subjected to peer review and publication; (3) the known or potential rate of error; (4) whether there are standards controlling the technique's operation; and (5) whether the theory has been generally accepted. *McLemore*, 863 So.2d at 37. Although these factors do not necessarily or exclusively apply to all experts in every case, a court should consider them first before addressing whether other factors are relevant to the particular case. *Id.*

Addressed below are each of the elements of the Rule 702 *Daubert*/*McLemore* standards as they apply to Mr. Berry's testimony and opinions offered in this case. Because Mr. Berry's testimony and opinions do not meet these standards, they were properly excluded by the trial court.

2. Mr. Berry's Opinions and Testimony Relating to the Forklift's Gear Shift Design Were Properly Excluded.

i. Mr. Berry's Testimony and Opinions Relating to the Gear Shift Design Were Not Based On Sufficient Facts And Data and Thus Were Properly Excluded.

Mr. Berry opined that the forklift was defectively designed because "[t]he F-N-R shift lever [of the forklift] does not lock in neutral and can easily be bumped into engagement." R. 708. In order to explain the forklift's movement under this theory, Mr. Berry was forced to create a scenario where the forklift's gear shift lever was actually bumped. The fundamental problem with this theory, however, is that there is **no** proof in this case that Townsend actually bumped the gear shift lever while exiting the subject forklift. Townsend testified:

- Q. Did you ever touch the lever with your right hand at all as you left the forklift?
- A. Not that I'm aware of. No, sir, I do not recollect that.
- Q. All right. Did any other part of your body touch the lever, to your knowledge, before you got out of the forklift?
- A. Not to my knowledge.

D.R.E. 5; R. 671 (p. 101), R. 672 (p. 106), R. 694 (p. 193). Later in his deposition, Townsend declared, "I am unaware of me doing that [hitting the gear shift lever]. I don't feel like I did." D.R.E. 5; R. 694 (p. 193). In a handwritten notation to p. 193 of his deposition, Townsend (apparently) added: "If I had[,] it would have driven out from under me while exiting the machine!"¹³ Moreover, Mr. Berry's own description of the accident in his expert report does not contain any recitation that Townsend bumped the gear shift lever into forward (D.R.E. 3; R. 568 (pp. 87-89); *see* D.R.E. 2; R. 479); nor does Townsend's Complaint. R. 7-16.

Townsend's Complaint, in fact, shows his original theory encompassed no such "inadvertent bump" sending the forklift's gear shift into forward. Instead, Townsend alleges that the subject forklift is defective due to "unexplained and unintentioned (sic) movement into gear out of neutral causing the truck to move forward or in reverse." R. 12. Mr. Berry, of course, now describes alleged design defects dependent upon an external force being applied to the gear shift lever to move it from neutral to forward -- an assumption unsupported by the record and which neither Townsend nor his counsel, in preparing his Complaint, ever contemplated.

Moreover, though Mr. Berry used his "hip bump" and "finger-flick" tests to essentially attempt to recreate what he alone surmises happened on the day of the incident; he admits he performed no independent investigation regarding the subject incident. (D.R.E. 3; R. 561 (p. 58). As he explained, "I didn't investigate. . . I guess investigation is if you're going through and talking to everybody with respect to facts of the accident. I was just trying to get -- I was looking at the design of the machine and the accident area." *Id.* (p. 60). Mr. Berry conducted no personal interviews (*id.* (p. 59)); and he did not prepare his own fact sheet. *Id.* Indeed, Mr. Berry frankly admitted he has never before given an opinion on "how a machine interacted with the person who was injured" (D.R.E. 3; R. 562 (p. 62)) -- but that is precisely what he attempted to

¹³ *See* n. 4, above.

do here.

Even in conducting an ‘inspection’ as he called it, Mr. Berry omitted important details. He did not determine the forklift truck’s idle speed (D.R.E. 3; R. 563 (p. 66) (he did not even know the recommended idle speed for the forklift); or measure the air pressure in its tires (*id.* (p. 66)); nor did he measure the dock’s length, width or height (D.R.E. 3; R. 561 (p. 61)); and he took only one slope measurement at the entire site. D.R.E. 3; R. 563 (p. 67).¹⁴

In short, Mr. Berry ignored fundamental measurements and circumstances relevant to the actual January 17, 2000 incident in his attempt to recreate what took place on that day. His testimony and opinions do not account for the data that was available to him -- and he did not adequately gather the necessary information on his own. There is no acceptable methodology that fails to consider the evidence and testimony of the individuals involved in the accident. *See Munoz v. Orr*, 200 F. 3d 291, 301 (5th Cir. 2000) (expert’s failure to consider other explanatory variables is fatal to reliability of testimony). Nor is there any basis for allowing expert testimony “at odds with the facts” at hand (*Gilbert*, 949 So. 2d at 791); or where the expert has failed to familiarize himself with key facts relating to the actual incident. *See Dedeaux Utility Co., Inc.*, 938 So. 2d at 843 (“[Expert’s] testimony was not based on sufficient facts and data and was therefore unreliable. . . the trial court erred in admitting that testimony.”); *Woolfolk*, 920 So. 2d at 1032 (reversing lower court allowing expert testimony premised on factual assumption unsubstantiated by any evidence in the record: “[I]f the premise upon which Dr. Stringer’s opinion was based is flawed, then it necessarily follows that the opinion is also flawed.”); *see also Brooks*, 934 So. 2d at 355 (affirming lower court’s exclusion of expert medical testimony where physician was wholly unfamiliar with plaintiffs’ alleged asbestos exposure; medical history or other factors); *Webb*, 930 So. 2d at 398 (excluding expert testimony on future lost

¹⁴ Mr. Berry likewise failed to assess key facts in conducting his “testing”, as detailed at pp. 19 - 21, below.

profits where not based on reasonable probability). Mr. Berry's opinions were properly excluded because they lack sufficient facts or data to support them.

ii. Mr. Berry's Methodology is Not Reliable

In Appellant's Brief, Townsend proposes that Mr. Berry's "methodology" does not warrant excluding his testimony -- but the only "methodology" Townsend appears to specifically address are the force gauge measurements taken by Mr. Berry during his inspection of the forklift. *See, e.g.*, Appellant's Brief at 15, 17. Townsend claims that "an engineer's testing of the pounds of pressure required to move a gear shift from neutral to forward is certainly not 'groundbreaking' . . . [and] the methodology utilized by Mr. Berry . . . has wide acceptance in the engineering community. . . ." Appellant's Brief at 17.

Engineers certainly do take such measurements; but the **crux** of Mr. Berry's opinions is his "hip bump" or "finger-flick" testing. Nowhere in his brief does Townsend specifically describe or show the "general acceptance" or "reliability" of **these** tests -- which are the actual grounds for Mr. Berry's opinions that the forklift truck was defectively designed.¹⁵

Nor does Mr. Berry's expert report demonstrate the reliability of his "testing". The "methodology" described therein advances only the guideline **principles** of review Mr. Berry espouses, a "design hierarchy." That is, Mr. Berry sets out **how** to approach a design review (principles), not **what** methods, techniques, review or analysis actually occurred in this case

¹⁵ Townsend quotes generally from *Tassin v. Sears, Roebuck and Co.*, 946 F. Supp. 1241, 1247-48 (M. D. La. 1996) to support the admissibility of Mr. Berry's testimony (Appellant's Brief at 17-18); but ignores the very principles acknowledged by that court which call for the **exclusion** of Mr. Berry's testimony here: "The expert's opinion. . . must rest on more than speculation, he must use the types of information, analyses and methods relied on by experts in his field, and the information that he gathers and the methodology he uses must reasonably support his conclusions." *Tassin*, 946 F. Supp. at 1248. Townsend also cites *Poole ex rel. Wrongful Death Beneficiaries of Poole v. Avara*, 908 So. 2d 716 (Miss. 2005) to support the admissibility of Mr. Berry's testimony (*see* Appellant's Brief at 116-17), but the Court there did not even address the admissibility of an expert's testing under *Daubert*.

(methodology). D.R.E. 2; R. 479-80.

Similarly, the affidavit Mr. Berry supplied in response to Doosan's motion to exclude his testimony in the court below (R. 696-714) gives no specifics on what "methodology" is allegedly accepted by the engineering community. Indeed, Townsend repeatedly discounts Mr. Berry's "hip bump" and "finger-flick" testing "as only one underlying factual basis" for his opinions (*see* Appellant's Brief at 8, 13, 15); but cites no other "methodology" upon which Mr. Berry's opinions may have been based.

In short, the proponent of evidence cannot simply elicit conclusory testimony from their expert. *McLemore*, 863 So. 2d at 36. Instead, the proponent must "show that the expert has based his testimony on methods and procedures of science, not merely his subjective beliefs or unsupported speculation." *Id.* An expert must elaborate regarding the tests conducted in order to verify his methodology. *Sittig v. Louisville Ladder Group LLC*, 136 F. Supp. 2d 610, 618 (W. D. La. 2001). In order to testify concerning a defect, one must do more than say "I am an ... engineer and I have looked at this; . . . it is the only one I have really looked at for this purpose, but I don't like it." *Id.* at 618 (quoting *Alevromagiros v. Hechinger Co.*, 993 F.2d 417, 420 (4th Cir. 1993)). Therefore, an expert's conclusions must be supported by good grounds for each step in the analysis. Any step that renders the analysis unreliable under the *Daubert* factors renders the expert's testimony inadmissible. In this case, the trial court properly exercised its gatekeeper function by focusing its reliability analysis on the methodology underlying Mr. Berry's opinions. *McLemore*, 863 So. 2d at 37. Because the methodology Mr. Berry utilized did not pass muster, his testimony and opinions were properly excluded.

iii. Mr. Berry's "Hip Bump" Test is Contrived and Wholly Unreliable.

Over the course of two days Mr. Berry was deposed at length about his qualifications, experience, methodology and opinions. Mr. Berry's testimony reveals that one aspect of his

"testing" involved attempting to engage the forklift's gear shift by brushing against it with his rear end or hip upon exiting the forklift. *See, e.g.,* D.R.E. 3; R. 563-65 (pp. 69, 73-74). Mr. Berry wholly failed to adequately record, analyze, or employ any reasoning or method with this "test:"

- Mr. Berry certainly had no statistically sufficient number of attempts to bump the gear shift lever: He believed he performed his "hip bump" test "just a couple of times," "possibly twice." D.R.E. 3; R. 564 (p. 73).
- Indeed, of the two times Mr. Berry could recall brushing the gear shift, it did not engage one of the times:

Q. Did you feel that happen [brush lever with right hip]?
A. Just barely. But then that's -- and the reason I said that at least a couple of times is I think one time I bumped it when it didn't go into gear. Brushed it and it didn't go into gear and one time it did go into forward.
Q. Were you trying to see if you could brush against it and cause it to go into forward gear?
A. I was trying to see if you could get off the forklift and brush it and knock it into gear.
Q. So the answer is yes, you were trying to see if you could knock it into forward gear?
A. No, I was trying to see if I could exit the forklift and brush it and bump it

D.R.E. 3; R. 565 (p. 74).

- Nor could Mr. Berry furnish any data from any other similar tests that he has conducted, "as far as the person, the type of forklift, the dimensions of the forklift, the number of times the person exited and the number of times the forklift was bumped into gear." D.R.E. 3; R. 566 (p. 79).
- Mr. Berry did not perform his testing with the engine running (D.R.E. 3; R. 565 (p. 74); though Townsend testified that he left the engine running when he got off the forklift on the day of the incident. D.R.E. 5; R. 671 (p. 102).
- Other than knowing Townsend's approximate weight (D.R.E. 3; R. 563 (p. 69)), Mr. Berry had no other data on Townsend's body height or other dimensions. *Id.* Mr. Berry was the only person to perform the "hip bump" test -- he did not conduct the "hip bump" test using someone of Townsend's similar size.

- Mr. Berry knew the forklift had an adjustable seat (D.R.E. 4; R. 610); and admitted that the seat position with respect to the steering wheel can influence the manner in which the operator gets off the forklift. D.R.E. 3; R. 565 (p. 77). Nevertheless, Mr. Berry did not know the adjustment range of the subject forklift's seat (D.R.E. 4; R. 610); or the position the seat was in when Townsend exited the forklift. D.R.E. 4; R. 610-11. He never asked Townsend that question. D.R.E. 4; R. 611.
- Mr. Berry took force measurements with a force gauge only in the optimal directions that would result in the least amount of force having to be applied to move the gear lever. R. 337. He made no force measurements with a force gauge accounting for the various angles from which a force could have come from an "accidental bump" upon which he bases his opinion. Nor does he have any measurements with respect to the speed at which the force was applied and how this could affect his results.
- Though Mr. Berry videotaped his measurements and "finger-flick" test that he performed that same day (described below); he did nothing to preserve his maneuverings in attempting to perform his "hip bump" test.

At best, Mr. Berry related an anecdotal occurrence, one that was not measured or quantified in any coherent fashion. Such "testing" is contrived and in no way constitutes a reliable methodology.

iv. Mr. Berry's Videotaped "Finger-Flick" Test Is Irrelevant and Inadequate on its Face.

Mr. Berry also conducted a video inspection of the subject forklift on February 8, 2001, which Doosan included as exhibit "D" to its motion to exclude Mr. Berry's testimony in the trial court. R. 337. The "finger-flick" test Mr. Berry recorded on this video is irrelevant here -- and a plain viewing of this video shows this "test" is wholly lacking in any of the attributes of "reliable" scientific testing.

At the beginning of the video Mr. Berry **identifies** the forklift appropriately, recording the forklift from several views, capturing the model and serial number, various warnings, the layout of certain controls (the forks, the location of the gear shift on the steering column, the machine's hour meter, etc.), and conducting some distance measurements (forks to seat, hip rest

to gear shift, *e.g.*). R. 337.

Mr. Berry also demonstrates or measures various general properties of the forklift truck; including demonstrating how to engage/disengage the parking brake; how the ignition works by turning the forklift's key in forward, reverse, and neutral; that the forklift will not advance in forward with parking brake engaged; that the forklift will advance in forward without activating the gas pedal; that the pedal brakes will stop the forklift in neutral; and demonstrating measurably (via a force gauge) the force required to shift gears from neutral to forward or reverse. R. 337.

Lastly, Mr. Berry demonstrates his "finger-flick" test: Carefully maneuvering the gear shift level, he finally precariously balances it at the threshold of the neutral detent; then "flicks" the lever in an attempt to show that it "can easily be bumped into engagement."¹⁶ R. 337. But Mr. Berry, himself, admits that the gear shift lever could not be "perched in a false neutral position and . . . on its own shift into gear." D.R.E. 3; R. 564 (p. 71). Instead, an external force on the gear shift lever is required. D.R.E. 3; R. 562 (p. 65). There is simply no evidence, however, that Townsend -- in his purported attempt to save the rolling hand cart -- failed to return the gear shift lever to the fully detented neutral position when he exited the forklift. Rather, Townsend testified he felt the lever click into neutral. D.R.E. 5; R. 670-71 (pp. 100-01). Thus, Mr. Berry's "finger-flick" test is wholly irrelevant -- his "test" begins **after** he has already manipulated the gear shift lever out of the fully detented neutral position. Mr. Berry's "finger-flick" test fails to constitute scientific or specialized knowledge which would assist a trier of fact in any way. It is plainly insufficient to support his conclusions in this case. *See Lentz*, 604 So. 2d at 246-47 (irrelevant expert testimony does nothing to "assist the trier of fact to understand the evidence or to determine a fact in issue" and thus is properly excluded under Miss. R. Evid. 702); *Hafstienn*,

¹⁶ *See* Berry Expert Report (D.R.E. 2; R. 480).

194 Fed. Appx. at 212-213, 2006 WL 2381900, 2-3 (affirming exclusion under Rule 702 of crash test data and expert testimony irrelevant to issue of causation).

v. Mr. Berry's Methodology Fails to Meet the Other *Daubert* Factors.

a. Mr. Berry's Testing is Not Generally Accepted.

Not only are Mr. Berry's tests flawed and unscientific, but also there is no general acceptance in the relevant engineering community of the "hip bump" test or the "finger-flick" test. As noted above, neither Townsend nor Mr. Berry has proffered any evidence that the relevant engineering community generally accepts or promotes Mr. Berry's "testing" methods. *See* pp. 18-19, above.

The engineering community emphasizes the importance of relevant testing to ensure even a modicum of reliability:

Testing [a] hypothesis may involve years of work during which the engineers may find themselves faced with new problems of developing new materials and new manufacturing processes to fully and effectively realize the new design ... The engineer's experience will be not unlike that of scientists finding that they must modify their hypothesis as testing it reveals its weaknesses.

Henry Petroski, "Reference Guide on Engineering Practice and Methods", *Reference Manual on Scientific Evidence* 586 (Federal Judicial Center 2000). Relating an anecdotal occurrence that his hip or "rear end" brushed against the gear shift lever is not the type of testing imagined by the courts. At best, Berry's findings amount to result-driven speculation, which is legally insufficient to support Townsend's claim. *See, e.g., Harris v. Int'l Truck and Engine Corp.*, 912 So. 2d 1101, 1106 (Miss. Ct. App. 2005) ("In order to be successful, [plaintiff] must show that his theory of the case is based on more than speculation, because juries must base their verdicts on something more than mere speculation or possibilities."). Such evidence does not satisfy Rule 702 requirements.

b. No Evidence Shows Mr. Berry's Testing was Subject to Peer Review or Publication.

There is no evidence that Mr. Berry's "hip bump" test or the "finger-flick" test were subjected to any peer review or publication. Mr. Berry has not identified any peer-reviewed articles or publications that support his methodology.

c. Mr. Berry's Testing Shows a High Potential Rate of Error.

There is a high potential rate of error associated with Mr. Berry's "hip bump" test and the "finger-flick" test. The basis of Mr. Berry's "test" methodology is knowingly attempting to apply an unknown and unquantified force on the gear shift lever with his hip, "rear-end" or finger to attempt to actuate it. On one try Mr. Berry moved the lever into forward; on the only other try the lever remained in neutral. There are no scientific controls for his "test" methodology, such as using someone of Townsend's similar shape to actuate the lever with his hip or "rear end". There is no evidence that Mr. Berry's "testing" resulted in anything other than subjective, error-ridden results.

d. No Standards Controlled Mr. Berry's Testing Methods.

There is also no evidence of any standards that control the application of Mr. Berry's test method. As discussed above, Mr. Berry used himself as a surrogate to exit the lift truck, not the plaintiff or someone of equal dimensions, and applied arbitrary forces using his hip, "rear end" and fingers as models to try to reach his conclusions. Mr. Berry did not set any standard prior to his testing to ensure that the tests were performed scientifically, even in its loosest sense.

Accordingly, because Mr. Berry's methodology in reaching his conclusions fails at every step of the *Daubert/McLemore* analysis, Mr. Berry's opinions were properly excluded in the court below.

3. Mr. Berry's OPS Design Alternative Was Properly Excluded.

i. Mr. Berry's Testimony and Opinions Relating to his OPS Design Alternative Were Not Based On Sufficient Facts And Data or Upon "Reliable" Methodology and Thus Were Properly Excluded.

In addition to his opinions relating to the forklift truck's gear shift design, Mr. Berry also opined that the "[t]he forklift should have been designed with an Operator Presence System (OPS) that would automatically neutralize the transmission any time that the operator was not seated on the machine." D.R.E. 2; R. 481 (emphasis added). As noted above, because it is undisputed that Townsend had already neutralized the transmission when he got off the forklift (D.R.E. 5; R. 670 (p. 100)); this design alternative would only come into play if the gear shift was moved into forward. Thus, Mr. Berry's OPS alternative design (like his design defect theory based on the forklift's gear shift design), is likewise premised on the wholly inadequate "testing" he performed (the "hip bump" and "finger-flick" tests) to support his theory that the gear shift lever somehow moved into the forward position after Townsend placed it in neutral. Accordingly, for all the reasons set forth at pp. 15-18 above, his opinions about the OPS -- like his opinions relating to the purported gear shift lever defect -- were properly excluded because they are not based on "sufficient facts and data;" nor do they meet the "reliability" requirement under Miss. R. Evid. 702 and *Daubert/McLemore*.

Indeed, Mr. Berry performed no other, independent testing on this theory. See D.R.E. 4; R. 637 ("Q: Have you ever tested an OPS system on a forklift truck that is of a similar size and design as the G25S Daewoo? . . . A: No."). Moreover, though Mr. Berry attached to his expert report numerous OSHA reports of adverse forklift events ostensibly in support of this opinion; when questioned about each one Mr. Berry was invariably forced to admit either that (a) these incidences were factually distinguishable; or (b) he simply did not know enough of the

underlying facts of each incident to make any relevant comparison. R. 576-87 (118-65).¹⁷

ii. Mr. Berry's Testimony and Opinions Relating to his OPS Design Alternative are Irrelevant and Do Not "Assist the Trier of Fact" and Thus Were Properly Excluded.

Additionally, Mr. Berry's OPS design alternative is not the requisite "feasible design alternative" required to prove Townsend's design defect claim: Miss. Code Ann. § 11-1-63(f)(ii) requires that plaintiff present: "a feasible design alternative. . . that would have to a reasonable probability prevented the harm without impairing the utility, usefulness, practicality or desirability of the product to users or consumers."

Without his manufactured theory that the gear shift lever was bumped into forward, Mr. Berry's OPS design alternative -- an OPS "automatically neutraliz[ing] the transmission" -- would not have "prevented the harm" that occurred here; namely, the rolling forklift truck which ultimately toppled over the edge with Townsend. This is so because the evidence is undisputed that Townsend **already** set the forklift in neutral before exiting. D.R.E. 5; R. 670 (p. 100). In particular, Townsend testified that he neutralized the forklift before exiting - - and he felt the gear shift lever click into place when he did so. *Id.* Mr. Berry's own summary of the facts of the accident in his report states that Townsend "shifted to neutral" (D.R.E. 2; R. 479); and contains no statement that the lever was moved from its neutral position. *Id.* See also D.R.E. 5; R. 568 (p. 89).

Mr. Berry also failed to give any opinion on how an OPS would affect the utility of the forklift at issue here; or provide any proof of the effectiveness of his alternative design in reducing the severity or frequency of accidents as compared to the forklift as presently equipped

¹⁷ Given that there is no evidence that any of these reports involved a **Doosan** forklift or accidents occurring under the circumstances here, the reports themselves are irrelevant and properly excluded. See, e.g., *Guy v. Crown Equipment Corp.*, 394 F. 3d 320 (5th Cir. 2004) (applying Mississippi law). In this forklift design defect lawsuit against Crown Equipment, the Fifth Circuit affirmed the district court's exclusion of accident reports as irrelevant where the reports did not concern the "left leg" injury that occurred in that case. *Id.* at 328-29.

causation and thus would not have “assist[ed] the trier of fact to understand the evidence or to determine a fact in issue.”).

C. Any Probative Value of Mr. Berry’s Opinions is Outweighed in a Rule 403 Analysis.

Further, in assessing the admissibility of an expert opinion, the court must weigh its probative value against the danger of unfair prejudice, confusion of the issues, misleading the jury, or waste of time. *See* Miss. R. Evid. 403. Mr. Berry’s opinions in this case were derived without objective analysis, and without a reliable methodology used to form these opinions. As such, any perceived probative value of his proposed expert testimony was substantially outweighed by its potential for unfair prejudice or jury confusion in this case. Exclusion of such testimony is particularly important in the expert context, given the potential that a jury may give added weight to his opinions in light of Mr. Berry’s “expert” status. *See Daubert*, 509 U.S. at 595 (acknowledging “powerful” nature of expert evidence requires judge to exercise thorough analysis of admissibility under Rule 403), quoting Jack B. Weinstein, *Rule 702 of the Federal Rules of Evidence is Sound; It Should Not Be Amended*, 138 F.R.D. 631, 632 (1991); *see also Edmonds v. State*, 955 So. 2d 787 (¶ 9) (Miss. 2007) (finding lower court erred in admitting expert’s “conclusory and improper testimony,” acknowledging “juries usually place greater weight on the testimony of an expert witness than that of a lay witness.”) (citations omitted). Rule 403 is an additional basis for affirming the exclusion of Mr. Berry’s testimony in this case.

D. Summary Judgment in Doosan’s Favor is Warranted.

1. Townsend Must Prove Each Element of His Design Defect Claim.

With respect to a design defect claim in particular, this Court has explained: “The [Mississippi] legislature has codified the requirements unique to a design defect claim and laid out an explicit blueprint for claimants to prove when advancing such a claim.” *Williams v. Bennett*, 921 So. 2d 1269, 1277 (Miss. 2006) (referencing Miss. Code. Ann. § 11-1-63).

Claimants failure to meet their statutory obligation leaves “the courts [with] no choice but to dismiss their claims because they [have] fail[ed] to proffer a key element of proof requisite to the court's determination of whether the claimant has advanced a valid claim under the statute.” *Id.*¹⁸

Under Miss. Code Ann. § 11-1-63, therefore, Townsend is required to “prove by the preponderance of the evidence that at the time the product left the control of the manufacturer or seller . . . [t]he product was designed in a defective manner. . . .” (Miss. Code Ann. § 11-1-63(a)(i)(3)); “[T]he defective condition rendered the product unreasonably dangerous to the user or consumer” (*id.* subparagraph (a)(ii)); and . . . [T]he defective and unreasonably dangerous condition of the product proximately caused the damages for which recovery is sought.” *Id.* subparagraph (a)(iii).

Additionally, in any design defect action under Miss. Code Ann. § 11-1-63(a)(i)(3), plaintiff must also prove that “[t]he product failed to function as expected;” and “there existed a feasible design alternative that would have to a reasonable probability prevented the harm.” Miss. Code Ann. § 11-1-63(f)(ii) (emphasis added). Defining a “feasible design alternative,” the Act provides that it “is a design that would have to a reasonable probability prevented the harm without impairing the utility, usefulness, practicality or desirability of the product to users or consumers.” *Id.*

2. Without Expert Proof, Townsend Cannot Prove His Design Defect Claim, Requiring Summary Judgment in Doosan’s Favor.

The exclusion of an expert witness for failure to meet the requisite standards under Miss. R. Evid. 702 may be “employed [by the trial court] as one of the grounds for granting summary judgment.” *Hubbard*, 954 So. 2d at 956. Here, Mr. Berry's opinions were the only evidence

¹⁸ Rule 56 mandates the entry of summary judgment where the non-moving party fails to make a showing sufficient to establish the existence of an element essential to his case on which he bears the burden of proof at trial. *Grisham v. John Q. Long V.F.W. Post, No. 4057, Inc.*, 519 So. 2d 413, 416 (Miss. 1988); see *Evan Johnson & Sons Const., Inc. v. State*, 877 So. 2d 360, 365 (Miss. 2004).

Townsend presented in attempting to meet each of the above-stated elements of his defective design claim under Miss. Code Ann. § 11-1-63. Without Mr. Berry's opinions, Townsend could not meet this criteria and summary judgment was warranted. "[T]he Mississippi Supreme Court has not permitted recovery on mere proof that damage occurred following the use of a product." *Farris v. Coleman Co., Inc.*, 121 F. Supp. 2d 1014, 1018 (N.D. Miss. 2000) (citing *Western Geophysical Co. v. Martin*, 253 Miss. 14, 174 So. 2d 706, 716 (1965)); *see also* *Hammond v. Coleman Co., Inc.*, 61 F. Supp. 2d 533, 542 (S.D. Miss. 1999) ("Without the expert testimony . . . [plaintiff] has failed to offer proof on a matter which he bears the burden of proof at trial. Plaintiff has offered no other testimony of any manufacturing defect, design defect, or warning or instruction defect of the [product]. Failure to offer evidence on a critical matter upon which he bears the burden is fatal to his case."). Accordingly, because Mr. Berry was properly excluded as an expert, summary judgment should be granted in Doosan's favor.

3. Even if Mr. Berry's Opinions Had Not Been Excluded, Townsend Had No Evidence that the Forklift Truck Failed to "Function as Expected" and Thus Summary Judgment is Still Appropriate.

Even if this Court finds Mr. Berry should not have been excluded as an expert, summary judgment in Doosan's favor may still be affirmed because Townsend had no proof that the forklift "failed to function as expected" -- a key element of his design defect claim. *See* Miss. Code Ann. § 11-1-63(f)(ii); *see also* *Williams*, 921 So. 2d at 1277 (a claimant's failure to meet each element of his design defect case requires dismissal).

In this case, Mr. Berry **admitted** "the forklift functioned as designed" (D.R.E. 3; R. 562 (p. 64)) and particularly noted in his inspection that the "park brake was functional and would stop the forklift from rolling down a slope." D.R.E. 1; R. 484. This is relevant because Mr. Berry also acknowledged the adequacy of the instructions and warnings that accompanied the forklift (D.R.E. 3; R. 570 (pp. 96-97)); warnings which explicitly cautioned the operator to

lower the forks; engage the parking brake; and turn off the engine, as well as set the gear shift to neutral, when parking the forklift truck. R. 345; D.R.E. 3; R. 570 (pp. 96-97).¹⁹

Of these safe practices, the **only** one Townsend followed was neutralizing the transmission. As Mr. Berry explained:

- A. An operator should be trained to pull on the park brake and lower the forks if possible and neutralize the transmission.
- Q. Of those three things in this case Townsend testified that he put the shifter into neutral; is this correct?
- A. That's my understanding, yes.
- Q. Did he engage the parking brake?
- A. No.

D.R.E. 3; R. 570 (p. 95). Indeed, not only did Townsend fail to set the parking brake on the day of his accident -- he also admitted that setting the parking brake was not his practice, *even apart from emergency situations*.²⁰ Both Mr. Berry and Townsend admitted that had Townsend set the forklift's parking brake, the accident would not have occurred. D.R.E. 3; R. 570 (pp. 94-95)); D.R.E. 4; R. 623; 627; 630-31; 639.

In short, Townsend (and his expert) knew that setting the parking brake would have prevented the accident -- but Townsend did not set it. There is no design defect where a product "functions as expected" and an accident occurs based on a party's failure to use that product as

¹⁹ These safe practices are likewise endorsed by the American Society of Mechanical Engineers under the safety standards applicable to the forklift under ANSI B56.1-1993:

5.2.11 Before leaving the operator's position: (a) bring truck to a complete stop; (b) place directional controls in neutral; (c) apply the parking brake; (d) lower load-engaging means fully. . . . In addition, when leaving the truck unattended: (e) stop the engine or turn off the controls. . . .

APP 3.

- ²⁰ Q. What was your practice as far as setting the parking brake in times when you weren't in an emergency situation or a short time situation?
- A. Normally, I would have the lift off, you know, if I'm not using it, and the brake **would not be a factor** with the engine killed.

D.R.E. 5; R. 671 (p. 102) (emphasis added).

designed. See *Clark v. Brass Eagle, Inc.*, 866 So. 2d 456, 461 (Miss. 2004); *Glenn v. Overhead Door Corp.*, 935 So. 2d 1074, 1081-83 (Miss. Ct. App. 2006).

In *Overhead Door Corp.*, for example, the Mississippi Court of Appeals affirmed summary judgment in favor of the garage door opener manufacturer (Overhead Door) where the only evidence showed (a) that the garage opened and closed when the opener was activated; and (b) plaintiff's ex-wife knew "that the garage door would not open until someone activated the device." *Id.* at 1081. Plaintiff's baby daughter died of carbon monoxide poisoning when plaintiff's ex-wife left her in a running car in the garage with the garage door shut. Plaintiff claimed the opener was defectively designed because it did not have a carbon monoxide sensor that would automatically open the door when a certain level was reached.

The court disagreed and dismissed plaintiff's case against Overhead Door. Holding that the garage door opener manufacturer could not be held responsible, the court emphasized that the opener "functioned as expected" - - and pointed out that the ex-wife knew how to use the opener, but failed to do so in this case. *Id.* at 1081-83. Elaborating, the court acknowledged that "a product's design is not defective simply because the manufacturer could have made it safer." *Id.* at 1082. Finding no error in the trial court's entry of summary judgment in Overhead Door's favor, the court recognized that "[i]t is one thing to show that the defendant might have designed a safer product; quite another to show that the product he did design was unreasonably dangerous." *Id.* at 1083, quoting *Weakley v. Fischbach & Moore, Inc.*, 515 F.2d 1260, 1267 (5th Cir.1975).²¹ See also *Clark*, 866 So. 2d at 461 (affirming summary judgment in paintball gun manufacturer's favor where plaintiff "offered no proof that the paintball gun used in the incident failed to function as expected"); see also *Austin v. Will-Burt Co.*, 361 F.3d 862, 872 (5th Cir.

²¹ As the Fifth Circuit explained in *Weakley*: "A defendant is not obliged to design the safest possible product, or one as safe as others make or a safer product than the one he has designed, so long as the design he has adopted is reasonably safe." *Weakley v. Fischbach & Moore, Inc.*, 515 F.2d 1260, 1267 (5th Cir.1975) (citations omitted).

2004) (applying Mississippi law) (concluding that Section § 11-1-63(f) of the Mississippi product liability act “unambiguously precludes recovery against the manufacturer on the basis of design defect unless the product “failed to function as expected”).

These principles apply here: Townsend abandoned a powered forklift truck on a narrow loading dock -- a dock that was constructed to slope down away from the warehouse and toward the parking lot where the forklift ultimately fell. Upon exiting the forklift, Townsend, as was his admitted practice, neglected to engage the parking brake - - a simple act that Townsend admitted was a safety procedure; and both Townsend and his expert admitted would have prevented the accident. Further, Townsend neither turned off the engine, nor lowered the forks, both of which are clearly denoted in the Operator’s Manual as appropriate practices for operators disembarking from the forklift. R. 342-45. That Townsend left a running forklift less than seven feet from the edge of a slightly sloped loading dock, and that the forklift predictably rolled forward towards the dock’s edge and ultimately toppled over demonstrates that the forklift’s design cannot reasonably be held to implicate Mississippi’s Product Liability Act. There was simply no evidence before the trial court or in this record that shows “[t]he product failed to function as expected” (Miss. Code Ann. § 11-1-63(f)(ii)) or that the forklift’s allegedly “defective” condition “proximately caused the damages for which recovery is sought.”²² Consequently, Townsend had no colorable claim for product liability, and his claims should be dismissed.

²² Nor did Townsend demonstrate that any of his expert’s design alternatives “would have to a reasonable probability prevented the harm without impairing the utility, usefulness, practicality or desirability of the product to users or consumers.” Miss. Code Ann. § 11-1-63(f)(ii). In particular, Townsend furnished no evidence demonstrating how any of Mr. Berry’s proposed alternative designs would have affected the forklift’s utility; nor did Townsend (or Mr. Berry) offer any evidence of the effectiveness of the alternative design in reducing the severity or frequency of accident. See pp. 26-27, above, citing *Johnson v. Davidson Ladders, Inc.*, 403 F. Supp. 2d 544, 550 (N.D. Miss. 2005); and *Guy v. Crown Equipment Corp.*, 394 F. 3d 320, 327 (5th Cir. 2004).

4. Summary Judgment on Pre-emption Grounds is Appropriate.

Because the subject forklift complied with federal standards, Townsend's design defect claims under state law are pre-empted. Dismissal of Townsend's lawsuit is warranted on this additional basis.

To explain, the use of forklifts in the workplace is regulated by the federal Occupational Safety and Health Act ("OSHA" or the "Act"), 29 U.S.C. §§651 *et seq.* and regulations promulgated thereunder (*see* 29 C.F.R. 1910.178) (APP 1). The Act requires that all forklift trucks "shall meet the design and construction requirements established in the ... 'American National Standard for Powered Industrial Trucks, Part II, ANSI B56.1-1969. . . .' 29 C.F.R. 1910.178(a)(2). APP1. With respect to warning devices, ANSI B56.1-1969 (APP 2) gives the forklift user the ability to determine when such warning or safety devices are necessary: "When operating conditions dictate, the user should request the manufacturer to equip the trucks or tractors with visual warning devices such as lights or blinkers. Where noise levels are high, combinations of these may be required to insure adequate warning."²³

In this case, Mr. Berry opined, among other conclusions, that the subject forklift is defective in design because it lacked **additional** safety or warning devices, such as an OPS that "neutralized the transmission" when the operator left the seat, or an alarm that would sound to alert the operator that the parking brake was not activated if the operator left the seat without

²³ ANSI B56.1-1993 (APP 3) followed revisions in 1975, 1983, and 1988 to the ANSI B56.1-1969 standard referenced in C.F.R. 1910.178(a)(2) and was the standard in effect as of the 1996 manufacture date of the subject forklift truck. *See* R. 9, 479, 723. Like ANSI B56.1-1969, ANSI B56.1-1993 similarly addresses warning and safety devices, requiring that a forklift "be equipped with an operator controlled horn, whistle, gong, or other sound producing device(s)." Also like ANSI B56.1-1969, ANSI B56.1-1993 continues to allow the user the ability to determine the need for additional warning or safety devices, as follows: "The user shall determine if operating conditions require the truck to be equipped with additional sound-producing or visual (such as lights or blinkers) devices, and be responsible for providing and maintaining such devices." *See* APP 3 (ANSI B56.1-1993, 4.15.1 – 4.15.2).

setting the parking brake. See D.R.E. 2; R. 481. Mr. Berry's suggestion that these purported additional safety or warning features are necessary for Doosan to avoid liability, however, overlooks two principles relevant here: (i) OSHA, through the ANSI B56.1 standard which it adopts, gives the forklift user the right to determine what additional warning/safety devices are needed based on the conditions at a particular plant; and (ii) Mr. Berry, himself, frankly admits that despite the absence of these additional devices, the subject forklift complied with ANSI B56.1 at the time of its manufacture. D.R.E. 3; R. 574 (p. 111); D.R.E. 4; R. 632-33; D.R.E. 1; R. 483 ("Machine conforms to B56.1").

Compliance with 29 C.F.R. 1910.178 and ANSI B56.1 pre-empts Townsend's state law design defect claims and mandates their dismissal -- a principle squarely upheld under closely analogous facts in *Gonzalez v. Ideal Tile Importing Co., Inc.*, 853 A. 2d 298 (N.J. Super. 2004) (*Gonzalez I*), *aff'd*, 877 A. 2d 1247 (N.J. 2005) (*Gonzalez II*)²⁴ (affirming summary judgment in manufacturer's favor, holding that state law claims are pre-empted by federal OSHA regulations and ANSI B56.1 applied to forklifts under "conflict pre-emption"²⁵ principles); and most recently in *Arnoldy v. Forklift L.P.*, 927 A. 2d 257, 266 (Pa. Super. 2007).

In *Gonzalez*, the plaintiff was injured when he was struck by a forklift traveling in reverse. Just like Townsend here, Mr. Gonzalez brought a state law product liability claim against the forklift truck manufacturer and component supplier, claiming design defects in the forklift due to a lack of additional warning devices. *Gonzalez I*, 853 A. 2d at 302-03. The forklift manufacturer moved for summary judgment, alleging that "state tort claims for

²⁴ Because *Gonzalez II* adopts the New Jersey Superior Court's opinion virtually *in toto*, Doosan will primarily cite to *Gonzalez I*.

²⁵ "Conflict pre-emption" occurs where state law "stands as an obstacle to the accomplishment and execution of the full purposes and objectives of Congress." *Gade v. National Solid Wastes Management Ass'n*, 505 U.S. 88, 98 (1992) (citations omitted).

workplace injuries are pre-empted when the allegedly defective product was manufactured in compliance with federal regulations. . . .” *Id.* The New Jersey courts agreed. *Gonzalez I*, 853 A. 2d at 310-11; 877 A. 2d at 1253.

Reviewing the same ANSI standard applicable here (ANSI B56.1) and the American National Standards Institute’s interpretation of same (853 A. 2d at 310-11), the court held: “the ANSI standards do not merely set a mandatory minimum for forklift safety devices, but regulate the universe of warning devices” *Gonzalez I*, 853 A. 2d at 310. Continuing, the court observed:

[T]he result of ANSI’s expertise in this area -- which OSHA coopted -- was its conclusion that the “other” warning devices, which plaintiff alleges were required to render the forklift safe, actually may tend to create additional dangers in the workplace. . . . That *is* a standard, not *the absence of* a standard, and the state regulation urged by plaintiff, through the imposition of tort liability, would stand “as an obstacle to the accomplishment and execution of” the federal regulation regarding additional warning devices.

Id. at 310-11 (citations omitted) (emphasis in original). Finding this constituted “conflict pre-emption,” the court held: “Accordingly, we conclude that plaintiff’s claim for damages based upon [the forklift manufacturer’s] alleged failure to comply with a standard which conflicts with OSHA’s standards was properly dismissed.”²⁶

Just recently the Pennsylvania appellate court in *Arnoldy* likewise held that plaintiffs’ tort action -- “predicated on the claim that the manufacturer of the forklift failed to install additional safety devices” -- was pre-empted by OSHA’s requirement that forklifts meet the standards set forth in ANSI B56.1-1969. *Arnoldy v. Forklift L.P.*, 927 A. 2d 257, 266 (Pa. Super. 2007). The *Arnoldy* court particularly noted that “OSHA . . . places the responsibility of the determination of

²⁶ Townsend contends that *Gonzalez* is “not dispositive” (Appellant’s Brief at 23); but ignores the close similarities between the facts and issues in *Gonzalez* and in the instant case. Namely, *Gonzalez* involves a forklift (the product at issue), the ANSI B56.1 standard (the standard at issue); and addresses whether OSHA’s federal standards permit state supplementation and regulation -- as through a product liability action -- or constitute the sole standard (the question at issue).

situation specific safety devices on the user of the equipment” (*id.*); thus imposing a state law requirement to install **additional** safety devices on all forklifts “is in direct conflict with the purpose behind the OSHA regulation, *i.e.*, to protect employees by allowing the end users of the product to determine which safety device would be the most effective in its particular situation.” *Id.*

“Further,” the court held, imposing additional safety requirements through state law principles “would impose liability on a manufacturer for complying with a federally-imposed option, *i.e.*, allowing the user to determine and request the appropriate safety device.” *Id.* To do so, the court explained, “would take away that federally-imposed option from the manufacturer, which clearly goes against Congress’ intent and would place manufacturers ‘in a position where they could be subject to varying standards from state to state, which could not all be complied with simultaneously.’” *Id.* (other citations omitted).

This concept is particularly relevant with respect to Mr. Berry’s OPS alternative design that would neutralize the transmission when the operator left the seat. During the time period applicable here no such system was required under ANSI B56.1 -- as Mr. Berry admits. D.R.E. 1; R. 483 (“Machine conforms to B56.1”) (expert report); D.R.E. 3; R. 574 (p. 111); D.R.E. 4; R. 632-33. In an analogous case, this Court applied “implied preemption through actual conflict” where plaintiffs brought a product liability air bag claim relating to a 1984 vehicle. *Cooper v. General Motors Corp.*, 702 So. 2d 428 (Miss. 1997).

In *Cooper*, the applicable National Traffic and Motor Vehicle Safety Act (NTMVSA) regulations did not require airbags at that time, but allowed manufacturers the option of installing them. Holding that the NTMVSA pre-empted plaintiffs’ claims, this Court stated: “Allowing common law liability under Mississippi law for failure to install an air bag punishes manufacturers for exercising a federally sanctioned choice. It would create an actual and

definitive conflict. Thus, the trier was not in error for granting partial summary judgment on the preemption claim." *Id.* at 435; *see also id.* at 433 (recognizing "[t]he overwhelming majority of the cases suggests that a common law claim for failure to install an air bag is subject to implied federal preemption.") (citations omitted); *Geier v. American Honda Motor Co., Inc.*, 529 U.S. 861, 886 (2000) (state law tort claims that vehicle was defective because it was not equipped with air bags were pre-empted by the NTMVSA). The same conflict between Mr. Berry's suggested additional safety designs and the actual ANSI B56.1 requirements exists here: Though ANSI B56.1 addresses warning and safety devices for forklift trucks, it did not require such an OPS system during the applicable time period; in fact, ANSI B56.1 allows the user to make the choice and determine whether additional warnings or safety devices are necessary.

In short, *Gonzalez*, *Arnoldy* and *Cooper* all show that Townsend's state law design defect claims against Doosan are pre-empted by OSHA, 29 C.F.R. 1910.178 and ANSI B56.1. Doosan's compliance with these applicable federal standards mandates dismissal of Townsend's claims in this case.

Citing *Frith v. BIC Corp.*, 863 So. 2d 960, 965 (Miss. 2004) (in which the Mississippi Supreme Court reversed the Mississippi Court of Appeals in order to uphold a grant of summary judgment to a defendant on the question of pre-emption), Townsend proposes that federal statutory and regulatory controls do not govern the subject forklift. Of course, this is not so, as even Mr. Berry admits. D.R.E. 3; R. 574 (p. 111); D.R.E. 4; R. 632-33; D.R.E. 1; R. 483. In *Frith*, the Court held that "there were only three ways in which federal pre-emption might occur: (1) where Congress explicitly pre-empts state law; (2) where pre-emption is implied because Congress has occupied the entire field, or (3) where pre-emption is implied because there is an actual conflict between federal and state law." *Frith*, 863 So. 2d at 965 (citing *Cooper*, 702 So. 2d at 434). Reviewing the federal safety standards applicable to the cigarette lighter at

issue, the Court held that the Frith's state law product liability claims conflicted with the "federal safety objectives and standards" and, accordingly, were pre-empted. 863 So. 2d at 966-68.

Here Townsend asserts that none of *Frith's* pre-emption vehicles are in play, quoting from OSHA.²⁷ What Townsend fails to acknowledge, however, is that Section 667(a) upon which he relies applies to those health and safety issues "**to which no standard is in effect**" under a preceding section. 29 U.S.C. § 667(a) (emphasis added). In this case, such a standard unquestionably governs. While Doosan admits that the triple layering of the federal standard leaves something to be desired in terms of accessibility and ease of reference, this case is squarely addressed nonetheless:

- **29 U.S.C. § 655** of OSHA exhaustively establishes the means by which federal health and safety standards are to be promulgated via the Federal Register;
- **29 C.F.R. 1910.178(a)(2)** is such a standard, which expressly requires powered trucks (including the subject G25S forklift) to meet the "design and construction requirements for powered industrial trucks established in the 'American National Standard for Powered Industrial Trucks, Part II, ANSI B56.1-1969', which is incorporated by reference";
- **ANSI B.56.1-1969 and B.56.1-1993** both address warning and safety designs and both contain language allowing the user to choose various features. B.56.1-1993 provides more detail, cataloging a litany of required and encouraged safety designs and practices, ranging from "operator controlled horn, whistle, gong, or other sound producing device(s)" to "additional sound-producing or visual (such as lights or blinkers) devices." Townsend's advocated alternative design, the operator presence sensing system (OPS), is nowhere to be found in this federally adopted standard.

²⁷ Townsend quotes 29 U.S.C. § 667(a), which states:

Nothing in this chapter shall prevent any State agency or court from asserting jurisdiction under State law over any occupational safety or health issue with respect to which no standard is in effect under section 655 of this title.

Appellant's Brief at 23.

Townsend essentially attempts to recast the same argument rejected by the Court in *Frith*, *i.e.*, "that while the States are no doubt obligated to apply what the [claimants] perceive to be the minimum standard established by federal law, the States are not prohibited from establishing a higher standard which would further protect their consumer-citizens." *Frith*, 863 So. 2d at 966. The *Frith* court already determined this "floor vs. ceiling" question in favor of federal pre-emption -- and the same analysis applies here.²⁸ Dismissal of Townsend's design defect claim based on pre-emption principles is an additional basis to uphold the trial court's summary judgment decision for Doosan in this case.

CONCLUSION

For all the reasons set forth above, the Court should affirm the trial judge's careful and considered determination that Townsend's sole expert, Mr. Berry, was not qualified to testify under Miss. R. Evid. 702 and *Daubert/McLemore* evidentiary standards. Because Mr. Berry's opinions and testimony were properly excluded, Townsend has no competent proof supporting his design defect claims and summary judgment in Doosan's favor should be affirmed. Even if this Court finds Mr. Berry should not have been excluded as an expert, summary judgment in Doosan's favor is warranted because Townsend has no proof that the forklift "failed to function as expected" -- a key element of his design defect claim. Finally, because the subject forklift truck complied with federal standards, Townsend's design defect claims under state law are pre-

²⁸ Indeed, even Townsend's cited United States Supreme Court authority (*see* Appellant's Brief at 24) supports Doosan's position:

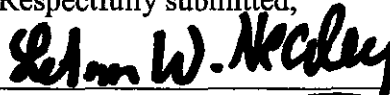
In the decision below, the Court of Appeals held that [29 U.S.C. § 667(b)] "unquestionably" pre-empts any state law or regulation that establishes an occupational health and safety standard on an issue for which OSHA has already promulgated a standard, unless the State has obtained the Secretary's approval for its own plan. **Every other federal and state court confronted with an OSH Act pre-emption challenge has reached the same conclusion, and so do we.**

Gade, 505 U.S. at 97 (citation omitted) (emphasis added).

empted and dismissal of Townsend's lawsuit is warranted on this additional basis. The Court affirm the trial court's judgment *in toto* and render judgment in Doosan's favor.

THIS, the 14th day of March, 2008.

Respectfully submitted,



Robert A. Miller, MB

Michael E. McWilliams, MB

LeAnn W. Nealey, MB #8497

Butler, Snow, O'Mara, Stevens & Cannada, PLLC

P. O. Box 22567

Jackson, MS 39225-2567

ATTORNEYS FOR APPELLEE
DOOSAN INFRACORE AMERICA CORPORATION,
F/K/A DAEWOO HEAVY INDUSTRIES AMERICA
CORPORATION

OF COUNSEL:

Butler, Snow, O'Mara, Stevens & Cannada, PLLC

17th Floor, AmSouth Plaza

Post Office Box 22567

Jackson, MS 39225-2567

(601) 948-5711

Michael H. Bai

Littleton Joyce Ughetta Park & Kelly LLP

39 Broadway, 34th Floor

New York, NY 10006

Direct: (212) 404-5775

Tel: (212) 404-5777

Fax: (212) 232-0088

E-Mail: michael.bai@littletonjoyce.com

MISS. R. APP. P. 28 (f)

APPENDIX

MISS. R. APP. P. 28 (f) APPENDIX INDEX

1. OSHA, 29 C.F.R. 1910.178 APP 1
2. Excerpts from ANSI B56.1-1969 APP 2
3. Excerpts from ANSI B56.1-1993 APP 3

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29 C.F.R. § 1910.178

C**Effective: April 17, 2006**

Code of Federal Regulations Currentness

Title 29. Labor

Subtitle B. Regulations Relating to Labor

Chapter XVII. Occupational Safety and Health
Administration, Department of Labor■ Part 1910. Occupational Safety and Health
Standards (Refs & Annos)■ Subpart N. Materials Handling and Stor-
age (Refs & Annos)**→ § 1910.178 Powered industrial trucks.****(a) General requirements.**

(1) This section contains safety requirements relating to fire protection, design, maintenance, and use of fork trucks, tractors, platform lift trucks, motorized hand trucks, and other specialized industrial trucks powered by electric motors or internal combustion engines. This section does not apply to compressed air or nonflammable compressed gas-operated industrial trucks, nor to farm vehicles, nor to vehicles intended primarily for earth moving or over-the-road hauling.

(2) All new powered industrial trucks acquired and used by an employer shall meet the design and construction requirements for powered industrial trucks established in the "American National Standard for Powered Industrial Trucks, Part II, ANSI B56.1-1969", which is incorporated by reference as specified in § 1910.6, except for vehicles intended primarily for earth moving or over-the-road hauling.

(3) Approved trucks shall bear a label or some other identifying mark indicating approval by the testing laboratory. See paragraph (a)(7) of this section and paragraph 405 of "American National Standard for Powered Industrial Trucks, Part II, ANSI B56.1-1969", which is incorporated by reference in paragraph (a)(2) of this section and which provides

that if the powered industrial truck is accepted by a nationally recognized testing laboratory it should be so marked.

(4) Modifications and additions which affect capacity and safe operation shall not be performed by the customer or user without manufacturers prior written approval. Capacity, operation, and maintenance instruction plates, tags, or decals shall be changed accordingly.

(5) If the truck is equipped with front-end attachments other than factory installed attachments, the user shall request that the truck be marked to identify the attachments and show the approximate weight of the truck and attachment combination at maximum elevation with load laterally centered.

(6) The user shall see that all nameplates and markings are in place and are maintained in a legible condition.

(7) As used in this section, the term, approved truck or approved industrial truck means a truck that is listed or approved for fire safety purposes for the intended use by a nationally recognized testing laboratory, using nationally recognized testing standards. Refer to § 1910.155(c)(3)(iv)(A) for definition of listed, and to § 1910.7 for definition of nationally recognized testing laboratory.

(b) Designations. For the purpose of this standard there are eleven different designations of industrial trucks or tractors as follows: D, DS, DY, E, ES, EE, EX, G, GS, LP, and LPS.

(1) The D designated units are units similar to the G units except that they are diesel engine powered instead of gasoline engine powered.

(2) The DS designated units are diesel powered units that are provided with additional safeguards to the exhaust, fuel and electrical systems. They may be used in some locations where a D unit may not be considered suitable.

(3) The DY designated units are diesel powered units that have all the safeguards of the DS units and in addition do not have any electrical equipment including the ignition and are equipped with temperature limitation features.

(4) The E designated units are electrically powered units that have minimum acceptable safeguards against inherent fire hazards.

(5) The ES designated units are electrically powered units that, in addition to all of the requirements for the E units, are provided with additional safeguards to the electrical system to prevent emission of hazardous sparks and to limit surface temperatures. They may be used in some locations where the use of an E unit may not be considered suitable.

(6) The EE designated units are electrically powered units that have, in addition to all of the requirements for the E and ES units, the electric motors and all other electrical equipment completely enclosed. In certain locations the EE unit may be used where the use of an E and ES unit may not be considered suitable.

(7) The EX designated units are electrically powered units that differ from the E, ES, or EE units in that the electrical fittings and equipment are so designed, constructed and assembled that the units may be used in certain atmospheres containing flammable vapors or dusts.

(8) The G designated units are gasoline powered units having minimum acceptable safeguards against inherent fire hazards.

(9) The GS designated units are gasoline powered units that are provided with additional safeguards to the exhaust, fuel, and electrical systems. They may be used in some locations where the use of a G unit may not be considered suitable.

(10) The LP designated unit is similar to the G unit except that liquefied petroleum gas is used for fuel instead of gasoline.

(11) The LPS designated units are liquefied petroleum gas powered units that are provided with additional safeguards to the exhaust, fuel, and electrical systems. They may be used in some locations where the use of an LP unit may not be considered suitable.

(12) The atmosphere or location shall have been classified as to whether it is hazardous or nonhazardous prior to the consideration of industrial trucks being used therein and the type of industrial truck required shall be as provided in paragraph (d) of this section for such location.

(c) Designated locations.

(1) The industrial trucks specified under subparagraph (2) of this paragraph are the minimum types required but industrial trucks having greater safeguards may be used if desired.

(2) For specific areas of use, see Table N-1 which tabulates the information contained in this section. References are to the corresponding classification as used in subpart S of this part.

(i) Power-operated industrial trucks shall not be used in atmospheres containing hazardous concentration of acetylene, butadiene, ethylene oxide, hydrogen (or gases or vapors equivalent in hazard to hydrogen, such as manufactured gas), propylene oxide, acetaldehyde, cyclopropane, diethyl ether, ethylene, isoprene, or unsymmetrical dimethyl hydrazine (UDMH).

(ii)(a) Power-operated industrial trucks shall not be used in atmospheres containing hazardous concentrations of metal dust, including aluminum, magnesium, and their commercial alloys, other metals of similarly hazardous characteristics, or in atmospheres containing carbon black, coal or coke dust except approved power-operated industrial trucks designated as EX may be used in such atmospheres.

(b) In atmospheres where dust of magnesium, aluminum or aluminum bronze may be present, fuses, switches, motor controllers, and circuit

- (F) Visibility (including restrictions due to loading);
 - (G) Fork and attachment adaptation, operation, and use limitations;
 - (H) Vehicle capacity;
 - (I) Vehicle stability;
 - (J) Any vehicle inspection and maintenance that the operator will be required to perform;
 - (K) Refueling and/or charging and recharging of batteries;
 - (L) Operating limitations;
 - (M) Any other operating instructions, warnings, or precautions listed in the operator's manual for the types of vehicle that the employee is being trained to operate.
- (ii) Workplace-related topics:
- (A) Surface conditions where the vehicle will be operated;
 - (B) Composition of loads to be carried and load stability;
 - (C) Load manipulation, stacking, and unstacking;
 - (D) Pedestrian traffic in areas where the vehicle will be operated;
 - (E) Narrow aisles and other restricted places where the vehicle will be operated;
 - (F) Hazardous (classified) locations where the vehicle will be operated;
 - (G) Ramps and other sloped surfaces that could affect the vehicle's stability;
 - (H) Closed environments and other areas where insufficient ventilation or poor vehicle maintenance could cause a buildup of carbon monoxide or diesel exhaust;
 - (I) Other unique or potentially hazardous environmental conditions in the workplace that could affect safe operation.
- (iii) The requirements of this section.
- (4) Refresher training and evaluation.
- (i) Refresher training, including an evaluation of the effectiveness of that training, shall be conducted as required by paragraph (I)(4)(ii) to ensure that the operator has the knowledge and skills needed to operate the powered industrial truck safely.
- (ii) Refresher training in relevant topics shall be provided to the operator when:
- (A) The operator has been observed to operate the vehicle in an unsafe manner;
 - (B) The operator has been involved in an accident or near-miss incident;
 - (C) The operator has received an evaluation that reveals that the operator is not operating the truck safely;
 - (D) The operator is assigned to drive a different type of truck; or
 - (E) A condition in the workplace changes in a manner that could affect safe operation of the truck.
- (iii) An evaluation of each powered industrial truck operator's performance shall be conducted at least once every three years.
- (5) Avoidance of duplicative training. If an operator has previously received training in a topic specified in paragraph (I)(3) of this section, and such training is appropriate to the truck and working conditions encountered, additional training in that topic is not required if the operator has been evaluated and found competent to operate the truck safely.

(6) Certification. The employer shall certify that each operator has been trained and evaluated as required by this paragraph (l). The certification shall include the name of the operator, the date of the training, the date of the evaluation, and the identity of the person(s) performing the training or evaluation.

(7) Dates. The employer shall ensure that operators of powered industrial trucks are trained, as appropriate, by the dates shown in the following table.

If the employee was hired:	The initial training and evaluation of that employee must be completed:
Before December 1, 1999	By December 1, 1999.
After December 1, 1999	Before the employee is assigned to operate a powered industrial truck.

(8) Appendix A to this section provides non-mandatory guidance to assist employers in implementing this paragraph (l). This appendix does not add to, alter, or reduce the requirements of this section.

(ii) A powered industrial truck is unattended when the operator is 25 ft. or more away from the vehicle which remains in his view, or whenever the operator leaves the vehicle and it is not in his view.

(m) Truck operations.

(1) Trucks shall not be driven up to anyone standing in front of a bench or other fixed object.

(iii) When the operator of an industrial truck is dismounted and within 25 ft. of the truck still in his view, the load engaging means shall be fully lowered, controls neutralized, and the brakes set to prevent movement.

(2) No person shall be allowed to stand or pass under the elevated portion of any truck, whether loaded or empty.

(6) A safe distance shall be maintained from the edge of ramps or platforms while on any elevated dock, or platform or freight car. Trucks shall not be used for opening or closing freight doors.

(3) Unauthorized personnel shall not be permitted to ride on powered industrial trucks. A safe place to ride shall be provided where riding of trucks is authorized.

(7) Brakes shall be set and wheel blocks shall be in place to prevent movement of trucks, trailers, or railroad cars while loading or unloading. Fixed jacks may be necessary to support a semitrailer during loading or unloading when the trailer is not coupled to a tractor. The flooring of trucks, trailers, and railroad cars shall be checked for breaks and weakness before they are driven onto.

(4) The employer shall prohibit arms or legs from being placed between the uprights of the mast or outside the running lines of the truck.

(8) There shall be sufficient headroom under overhead installations, lights, pipes, sprinkler system, etc.

(5)(i) When a powered industrial truck is left unattended, load engaging means shall be fully lowered, controls shall be neutralized, power shall be shut off, and brakes set. Wheels shall be blocked if the truck is parked on an incline.

(9) An overhead guard shall be used as protection against falling objects. It should be noted that an overhead guard is intended to offer protection from the impact of small packages, boxes, bagged material, etc., representative of the job application, but not to withstand the impact of a falling capacity load.

(10) A load backrest extension shall be used whenever necessary to minimize the possibility of the load or part of it from falling rearward.

(11) Only approved industrial trucks shall be used in hazardous locations.

(12), (13) [Reserved]

(14) Fire aisles, access to stairways, and fire equipment shall be kept clear.

(n) Traveling.

(1) All traffic regulations shall be observed, including authorized plant speed limits. A safe distance shall be maintained approximately three truck lengths from the truck ahead, and the truck shall be kept under control at all times.

(2) The right of way shall be yielded to ambulances, fire trucks, or other vehicles in emergency situations.

(3) Other trucks traveling in the same direction at intersections, blind spots, or other dangerous locations shall not be passed.

(4) The driver shall be required to slow down and sound the horn at cross aisles and other locations where vision is obstructed. If the load being carried obstructs forward view, the driver shall be required to travel with the load trailing.

(5) Railroad tracks shall be crossed diagonally wherever possible. Parking closer than 8 feet from the center of railroad tracks is prohibited.

(6) The driver shall be required to look in the direction of, and keep a clear view of the path of travel.

(7) Grades shall be ascended or descended slowly.

(i) When ascending or descending grades in excess of 10 percent, loaded trucks shall be driven with the load upgrade.

(ii) [Reserved]

(iii) On all grades the load and load engaging means shall be tilted back if applicable, and raised only as far as necessary to clear the road surface.

(8) Under all travel conditions the truck shall be operated at a speed that will permit it to be brought to a stop in a safe manner.

(9) Stunt driving and horseplay shall not be permitted.

(10) The driver shall be required to slow down for wet and slippery floors.

(11) Dockboard or bridgeplates, shall be properly secured before they are driven over. Dockboard or bridgeplates shall be driven over carefully and slowly and their rated capacity never exceeded.

(12) Elevators shall be approached slowly, and then entered squarely after the elevator car is properly leveled. Once on the elevator, the controls shall be neutralized, power shut off, and the brakes set.

(13) Motorized hand trucks must enter elevator or other confined areas with load end forward.

(14) Running over loose objects on the roadway surface shall be avoided.

(15) While negotiating turns, speed shall be reduced to a safe level by means of turning the hand steering wheel in a smooth, sweeping motion. Except when maneuvering at a very low speed, the hand steering wheel shall be turned at a moderate, even rate.

(o) Loading.

(1) Only stable or safely arranged loads shall be

handled. Caution shall be exercised when handling off-center loads which cannot be centered.

(2) Only loads within the rated capacity of the truck shall be handled.

(3) The long or high (including multiple-tiered) loads which may affect capacity shall be adjusted.

(4) Trucks equipped with attachments shall be operated as partially loaded trucks when not handling a load.

(5) A load engaging means shall be placed under the load as far as possible; the mast shall be carefully tilted backward to stabilize the load.

(6) Extreme care shall be used when tilting the load forward or backward, particularly when high tiering. Tilting forward with load engaging means elevated shall be prohibited except to pick up a load. An elevated load shall not be tilted forward except when the load is in a deposit position over a rack or stack. When stacking or tiering, only enough backward tilt to stabilize the load shall be used.

(p) Operation of the truck.

(1) If at any time a powered industrial truck is found to be in need of repair, defective, or in any way unsafe, the truck shall be taken out of service until it has been restored to safe operating condition.

(2) Fuel tanks shall not be filled while the engine is running. Spillage shall be avoided.

(3) Spillage of oil or fuel shall be carefully washed away or completely evaporated and the fuel tank cap replaced before restarting engine.

(4) No truck shall be operated with a leak in the fuel system until the leak has been corrected.

(5) Open flames shall not be used for checking electrolyte level in storage batteries or gasoline level in fuel tanks.

(q) Maintenance of industrial trucks.

(1) Any power-operated industrial truck not in safe operating condition shall be removed from service. All repairs shall be made by authorized personnel.

(2) No repairs shall be made in Class I, II, and III locations.

(3) Those repairs to the fuel and ignition systems of industrial trucks which involve fire hazards shall be conducted only in locations designated for such repairs.

(4) Trucks in need of repairs to the electrical system shall have the battery disconnected prior to such repairs.

(5) All parts of any such industrial truck requiring replacement shall be replaced only by parts equivalent as to safety with those used in the original design.

(6) Industrial trucks shall not be altered so that the relative positions of the various parts are different from what they were when originally received from the manufacturer, nor shall they be altered either by the addition of extra parts not provided by the manufacturer or by the elimination of any parts, except as provided in paragraph (q)(12) of this section. Additional counterweighting of fork trucks shall not be done unless approved by the truck manufacturer.

(7) Industrial trucks shall be examined before being placed in service, and shall not be placed in service if the examination shows any condition adversely affecting the safety of the vehicle. Such examination shall be made at least daily.

Where industrial trucks are used on a round-the-clock basis, they shall be examined after each shift. Defects when found shall be immediately reported and corrected.

(8) Water mufflers shall be filled daily or as frequently as is necessary to prevent depletion of the

supply of water below 75 percent of the filled capacity. Vehicles with mufflers having screens or other parts that may become clogged shall not be operated while such screens or parts are clogged. Any vehicle that emits hazardous sparks or flames from the exhaust system shall immediately be removed from service, and not returned to service until the cause for the emission of such sparks and flames has been eliminated.

(9) When the temperature of any part of any truck is found to be in excess of its normal operating temperature, thus creating a hazardous condition, the vehicle shall be removed from service and not returned to service until the cause for such overheating has been eliminated.

(10) Industrial trucks shall be kept in a clean condition, free of lint, excess oil, and grease. Noncombustible agents should be used for cleaning trucks. Low flash point (below 100° F.) solvents shall not be used. High flash point (at or above 100° F.) solvents may be used. Precautions regarding toxicity, ventilation, and fire hazard shall be consonant with the agent or solvent used.

(11) [Reserved]

(12) Industrial trucks originally approved for the use of gasoline for fuel may be converted to liquefied petroleum gas fuel provided the complete conversion results in a truck which embodies the features specified for LP or LPS designated trucks. Such conversion equipment shall be approved. The description of the component parts of this conversion system and the recommended method of installation on specific trucks are contained in the "Listed by Report."

[39 FR 23502, June 27, 1974, as amended at 40 FR 23073, May 28, 1975; 43 FR 49749, Oct. 24, 1978; 49 FR 5322, Feb. 10, 1984; 53 FR 12122, April 12, 1988; 55 FR 32015, Aug. 6, 1990; 61 FR 9239, March 7, 1996; 63 FR 66270, Dec. 1, 1998; 64 FR 22552, April 27, 1999; 68 FR 32638, June 2, 2003; 71 FR 16672, April 3, 2006]

SOURCE: 39 FR 23502, June 27, 1974; 51 FR 24526, 24527, July 7, 1986; 51 FR 34560, Sept. 29, 1986; 53 FR 12122, April 12, 1988; 53 FR 34737, Sept. 8, 1988; 55 FR 46054 Nov. 1, 1990; 61 FR 9239, March 7, 1996; 63 FR 33467, June 18, 1998; 63 FR 66270, Dec. 1, 1998; 68 FR 32638, June 2, 2003; 71 FR 16672, April 3, 2006, unless otherwise noted.

AUTHORITY: Secs. 4, 6, and 8 of the Occupational Safety and Health Act of 1970 (29 U.S.C. 653, 655, 657); Secretary of Labor's Order No. 12-71 (36 FR 8754), 8-76 (41 FR 25059), 9-83 (48 FR 35736), 1-90 (55 FR 9033), 6-96 (62 FR 111), 3-2000 (65 FR 50017), or 5-2002 (67 FR 65008) as applicable; and 29 CFR part 1911; Sections 1910.176, 1910.177, 1910.178, 1910.179, 1910.180, 1910.181, and 1910.184 also issued under 29 CFR part 1911.

29 C. F. R. § 1910.178, 29 CFR § 1910.178

Current through March 6, 2008; 73 FR 12031

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U S A S T A N D A R D

Safety Standard for Powered Industrial Trucks

USAS B56.1 - 1969

Sponsor

The American Society of Mechanical Engineers

Published by

THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS

United Engineering Center

345 East 47th Street

New York N.Y. 10017

AMERICAN NATIONAL STANDARD

This standard is one of more than 4000 approved as either a USA Standard or as an American Standard. It became an American National Standard in October 1969 when the Institute changed its name to American National Standards Institute, Inc.

USA STANDARD B56.1 - 1969
SAFETY STANDARD FOR POWERED INDUSTRIAL TRUCKS

513

513 TRUCKS AND RAILROAD CARS

- A. The brakes of highway trucks shall be set and wheel chocks placed under the rear wheels to prevent the trucks from rolling while they are boarded with powered industrial trucks.
- B. Wheel stops or other recognized positive protection shall be provided to prevent railroad cars from moving during loading or unloading operations.
- C. Fixed jacks may be necessary to support a semitrailer and prevent up-ending during the loading or unloading when the trailer is not coupled to a tractor.
- D. Positive protection shall be provided to prevent railroad cars from being moved while dockboards or bridge plates are in position. Adequate warning methods should be established with local railroad authorities to provide protection against moving railroad cars during loading or unloading operations.

514 WARNING DEVICE

When operating conditions dictate, the user should request the manufacturer to equip the trucks or tractors with visual warning devices such as lights or blinkers. Where noise levels are high, combinations of these may be required to insure adequate warning.

SECTION 6

OPERATING SAFETY RULES AND PRACTICES

601 OPERATOR QUALIFICATIONS

Operators of powered industrial trucks shall be physically qualified. An examination should be made on an annual basis and include such things as field of vision, hearing, depth perception, and reaction timing.

602 OPERATOR TRAINING

Only trained and authorized operators shall be permitted to operate a powered industrial truck. Methods shall be devised to train operators in the safe operation of powered industrial trucks. Badges or other visual indication of the operators' authorization should be displayed at all times during work period.

603 GENERAL

- A. Safeguard the pedestrians at all times. Do not drive a truck up to anyone standing in front of a bench or other fixed object.
- B. Do not allow anyone to stand or pass under the elevated portion of any truck, whether loaded or empty.

C. Unauthorized personnel shall not be permitted to ride on powered industrial trucks. A safe place to ride shall be provided where riding of trucks is authorized.

D. Do not put arms or legs between the up-rights of the mast or outside the running lines of the truck.

E. When leaving a powered industrial truck unattended, load engaging means shall be fully lowered, controls shall be neutralized, power shut off, brakes set, key or connector plug removed. Block wheels if truck is parked on an incline.

F. Maintain a safe distance from the edge of ramps or platforms and do not, while on any elevated dock or platform, push freight cars. Do not use trucks for opening or closing freight doors.

G. Have brakes set and wheel blocks in place to prevent movement of trucks, trailers, or railroad cars while loading or unloading. Fixed jacks may be necessary to support a semitrailer during loading or unloading when the trailer is not coupled to a tractor. Check the flooring of trucks, trailers, and railroad cars for breaks and weakness before driving onto them.

H. Be sure of sufficient headroom under overhead installations, lights, pipes, sprinkler system, etc.

I. Use an overhead guard as protection against falling objects.

Warning: An overhead guard is intended to offer protection from the impact of small packages, boxes, bagged material, etc., representative of the job application, but not to withstand the impact of a falling capacity load.

J. Use a load backrest extension whenever necessary to minimize the possibility of the load or part of it from falling rearward.

K. Use only approved industrial trucks in hazardous locations.

L. Whenever a truck is equipped with vertical only, or vertical and horizontal travel controls elevatable with the lifting carriage or forks for lifting personnel, the following additional precautions should be taken for the protection of personnel being elevated.

(a) Use of a safety platform firmly secured to the lifting carriage and/or forks.

(b) Provide means whereby personnel on the platform can shut off power to the truck.

(c) Provide such protection from falling

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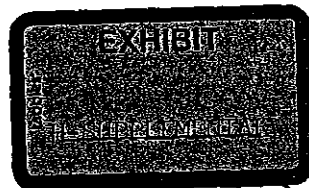
AN AMERICAN NATIONAL STANDARD

POWERED AND NONPOWERED INDUSTRIAL TRUCKS

Safety Standard for Low Lift and High Lift Trucks

ASME B56.1-1993

(REVISION OF ASME/ANSI B56.1-1988)



The American Society of
Mechanical Engineers

345 East 47th Street, New York, N.Y. 10017

POWERED AND NONPOWERED INDUSTRIAL TRUCKS

GENERAL

This Standard is one of a series that has been formulated with the American Society of Mechanical Engineers as Sponsor in accordance with the Accredited Organization method, the procedures accredited by the American National Standards Institute, Inc., and the following scope.

Establishment of the safety requirements relating to the elements of design, operation, and maintenance; standardization relating to principal dimensions to facilitate interchangeability, test methods, and test procedures of powered and nonpowered industrial trucks (not including vehicles intended primarily for earth moving or over-the-road hauling); and maintenance of liaison with the International Organization for Standardization (ISO) in all matters pertaining to powered and nonpowered industrial trucks.

One purpose of the Standard is to serve as a guide to governmental authorities having jurisdiction over subjects within the scope of the Standard. It is expected, however, that the Standard will find a major application in industry, serving as a guide to manufacturers, purchasers, and users of the equipment.

For convenience, Standards for Powered and Nonpowered Industrial Trucks have been divided into separate volumes:

Safety Standards

- B56.1 Low Lift and High Lift Trucks
- B56.5 Guided Industrial Vehicles and Automated Functions of Manned Industrial Vehicles
- B56.6 Rough Terrain Forklift Trucks
- B56.7 Industrial Crane Trucks
- B56.8 Personnel and Burden Carriers
- B56.9 Operator Controlled Industrial Tow Tractors
- B56.10 Manually Propelled High Lift Industrial Trucks

Standardization Standards

- B56.11.1 Double Race or Bi-Level Swivel and Rigid Industrial Casters
- B56.11.3 Load Handling Symbols for Powered Industrial Trucks
- B56.11.4 Hook-Type Forks and Fork Carriers for Powered Industrial Forklift Trucks
- B56.11.5 Measurement of Sound Emitted by Low Lift, High Lift, and Rough Terrain Powered Industrial Trucks
- B56.11.6 Evaluation of Visibility From Powered Industrial Trucks

Safety standards that were previously listed as B56 volumes but now have different identification due to a change in standards development assignments are as follows.

- NFPA 505 Fire Safety Standard for Powered Industrial Trucks — Type Designations, Areas of Use, Maintenance and Operation (formerly B56.2)
- UL 583 Standard for Safety for Electric-Battery-Powered Industrial Trucks (formerly B56.3)
- UL 558 Standard for Safety for Internal Combustion Engine-Powered Industrial Trucks (formerly B56.4)

If adopted for governmental use, the references to other national standards in the specific volumes may be changed to refer to the corresponding governmental regulations.

The use of powered and nonpowered industrial trucks is subject to certain hazards that cannot be completely eliminated by mechanical means, but the risks can be minimized by the exercise of intelligence, care, and common sense. It is therefore essential to have competent and careful operators, physically and mentally fit, and thoroughly trained in the safe operation of the equipment and the handling of the loads. Serious hazards are overloading, instability of the load, obstruction to the free passage of the load, collision with objects or

pedestrians, poor maintenance, and use of equipment for a purpose for which it was not intended or designed.

Suggestions for improvement of these Standards, especially those based on actual experience in their application, shall be submitted to the Secretary of the B56 Committee, ASME, United Engineering Center, 345 East 47th Street, New York, NY 10017.

Comments shall be written in accordance with the following format:

(a) specify paragraph designation of the pertinent volume;

(b) indicate suggested change (addition, deletion, revision, etc.);

(c) briefly state reason and/or evidence for suggested change;

(d) submit suggested changes to more than one paragraph in the order in which they appear in the volume.

The appropriate B56 Subcommittee will consider each suggested revision at its first meeting after receipt of the suggested revision(s).

4.14.5 Do not move railroad cars or trailers with a powered industrial truck unless the truck is properly designed and equipped for that operation.

4.15 Warning Device

4.15.1 Every truck shall be equipped with an operator-controlled horn, whistle, gong, or other sound-producing device(s).

4.15.2 The user shall determine if operating conditions require the truck to be equipped with additional sound-producing or visual (such as lights or blinkers) devices, and be responsible for providing and maintaining such devices.

4.16 Relocating Powered Industrial Trucks

When utilizing lifting equipment such as elevators, cranes, ship hoisting gear, etc., to relocate a powered industrial truck, the user shall ensure that the capacity of the hoisting equipment being used is not exceeded.

4.17 Elevating Personnel

4.17.1 Only operator-up high lift trucks have been designed to lift personnel. If a work platform is used on trucks designed and intended for handling materials, the requirements of paras. 4.17.2 and 4.17.3 shall be met for the protection of personnel.

4.17.2 Whenever a truck is used to elevate personnel, the following precautions for the protection of personnel shall be taken:

(a) comply with the design requirements in para. 7.35 of this Standard;

(b) provide protection for personnel in their normal working position on the platform from moving parts of the truck that represent a hazard;

(c) be certain that required restraining means such as railings, chains, cable, body belt(s) with lanyard(s), or deceleration devices, etc., are in place and properly used;

(d) be certain that the lifting mechanism is operating smoothly throughout its entire lift height, both empty and loaded, and that all lift limiting devices and latches, if provided, are functional;

(e) provide overhead protection as indicated to be necessary by the operating conditions;

(f) replace any body belt, lanyard, or deceleration

device that has sustained permanent deformation or is otherwise damaged.

4.17.3 Whenever a truck is equipped with a work platform (does not include operator-up high lift trucks), precautions specified in para. 4.17.2 shall be taken and the following additional precautions shall be taken for the protection of personnel:

(a) provide a platform that complies with the design requirements in para. 7.35.3;

(b) the platform attachment means are applied and the platform is securely attached to the lifting carriage or forks;

(c) when the lifting carriage and/or forks are supporting the platform used to elevate personnel, the lifting carriage and/or forks are secured to prevent them from pivoting upward;

(d) the mast is vertical — do not operate on a side slope;

(e) the platform is horizontal and centered and not tilted forward or rearward when elevated;

(f) the truck has a firm and level footing;

(g) place all travel controls in neutral and set parking brake;

(h) before elevating personnel, mark area with cones or other devices to warn of work by elevated personnel;

(i) lift and lower personnel smoothly, with caution, and only at their request;

(j) avoid overhead obstructions and electric wires;

(k) keep hands and feet clear of controls other than those in use;

(l) move truck and/or platform slowly, only for minor adjustments in horizontal positioning when personnel are on the platform, and only at their request;

(m) on trucks equipped with rotators, mechanically secure the rotator to prevent movement;

(n) have a trained operator in position to control the truck or available to operate controls. When the operator is not in the operating position, engage the parking brake and block the wheels;

(o) the combined weight of the platform, load, and personnel not to exceed one-half of the capacity as indicated on the nameplate of the truck on which the platform is used;

(p) personnel are to remain on the platform floor. Use of railings, planks, ladders, etc., on the platform for purpose of achieving additional reach or height is prohibited;

(q) personnel and equipment on the platform not to exceed the available space;

(r) lower platform to floor level for personnel to enter and exit. Do not climb on any part of the truck in attempting to enter and exit.

4.18 Operator Qualifications

Only trained and authorized persons shall be permitted to operate a powered industrial truck. Operators of powered industrial trucks shall be qualified as to visual, auditory, physical, and mental ability to operate the equipment safely according to para. 4.19 and all other applicable parts of Section 4.

4.19 Operator Training

4.19.1 Personnel who have not been trained to operate powered industrial trucks may operate a truck for the purposes of training only, and only under the direct supervision of the trainer. This training should be conducted in an area away from other trucks, obstacles, and pedestrians.

4.19.2 The operator training program should include the user's policies for the site where the trainee will operate the truck, the operating conditions for that location, and the specific truck the trainee will operate. The training program shall be presented to all new operators regardless of previous experience.

4.19.3 The training program shall inform the trainee that:

(a) The primary responsibility of the operator is to use the powered industrial truck safely following the instructions given in the training program.

(b) Unsafe or improper operation of a powered industrial truck can result in: death or serious injury to the operator or others; damage to the powered industrial truck or other property.

4.19.4 The training program shall emphasize safe and proper operation to avoid injury to the operator and others and prevent property damage, and shall cover the following areas:

(a) Fundamentals of the powered industrial truck(s) the trainee will operate, including:

(1) characteristics of the powered industrial truck(s), including variations between trucks in the workplace;

(2) similarities to and differences from automobiles;

(3) significance of nameplate data, including rated capacity, warnings, and instructions affixed to the truck;

(4) operating instructions and warnings in the operating manual for the truck, and instructions for inspection and maintenance to be performed by the operator;

(5) type of motive power and its characteristics;

(6) method of steering;

(7) braking method and characteristics, with and without load;

(8) visibility, with and without load, forward and reverse;

(9) load handling capacity, weight and load center;

(10) stability characteristics with and without load, with and without attachments;

(11) controls—location, function, method of operation, identification of symbols;

(12) load handling capabilities; forks, attachments;

(13) fueling and battery charging;

(14) guards and protective devices for the specific type of truck;

(15) other characteristics of the specific industrial truck.

(b) Operating environment and its effect on truck operation, including:

(1) floor or ground conditions including temporary conditions;

(2) ramps and inclines, with and without load;

(3) trailers, railcars, and dockboards (including the use of wheel chocks, jacks, and other securing devices);

(4) fueling and battery charging facilities;

(5) the use of "classified" trucks in areas classified as hazardous due to risk of fire or explosion, as defined in ANSI/NFPA 505;

(6) narrow aisles, doorways, overhead wires and piping, and other areas of limited clearance;

(7) areas where the truck may be operated near other powered industrial trucks, other vehicles, or pedestrians;

(8) use and capacity of elevators;

(9) operation near edge of dock or edge of improved surface;

(10) other special operating conditions and hazards which may be encountered.

(c) Operation of the powered industrial truck, including:

(1) proper preshift inspection and approved method for removing from service a truck which is in need of repair;

(2) load handling techniques: lifting, lowering, picking up, placing, tilting;

(3) traveling, with and without loads; turning corners;

(4) parking and shutdown procedures;

(5) other special operating conditions for the specific application.

(d) Operating safety rules and practices, including:

(1) provisions of this Standard in Sections 5.1 to 5.4 address operating safety rules and practices;

(2) provisions of this Standard in Section 5.5 address care of the truck.

(3) other rules, regulations, or practices specified by the employer at the location where the powered industrial truck will be used.

(e) Operational training practice, including:

(1) if feasible, practice in the operation of powered industrial trucks shall be conducted in an area separate from other workplace activities and personnel;

(2) training practice shall be conducted under the supervision of the trainer;

(3) training practice shall include the actual operation or simulated performance of all operating tasks such as load handling, maneuvering, traveling, stopping, starting, and other activities under the conditions which will be encountered in the use of the truck.

4.19.5 Testing, Retraining, and Enforcement

(a) During training, performance and oral and/or written tests shall be given by the employer to measure the skill and knowledge of the operator in meeting the requirements of the Standard. Employers shall establish a pass/fail requirement for such tests. Employers may delegate such testing to others but shall remain responsible for the testing. Appropriate records shall be kept.

(b) Operators shall be retrained when new equipment is introduced, existing equipment is modified, operating conditions change, or an operator's performance is unsatisfactory.

(c) The user shall be responsible for enforcing the safe use of the powered industrial truck according to the provisions of this Standard.

NOTE: Information on operator training is available from such sources as powered industrial truck manufacturers, government agencies dealing with employee safety, trade organizations of users of powered industrial trucks, public and private organizations, and safety consultants.

5 OPERATING SAFETY RULES AND PRACTICES

5.1 Operator Responsibility

5.1.1 Safe operation is the responsibility of the operator.

5.1.2 The operator shall develop safe working habits and also be aware of hazardous conditions in order to protect himself, other personnel, the truck, and other material.

5.1.3 The operator shall be familiar with the operation and function of all controls and instruments before undertaking to operate the truck.

5.1.4 Before operating any truck, truck operators shall have read and be familiar with the operator's manual for the particular truck being operated and they shall also abide by the safety rules and practices in paras. 5.2 through 5.5.

5.1.5 Before operating any truck, the operator shall be familiar with unusual operating conditions which may require additional safety precautions or special operating instructions.

5.2 General

5.2.1 Before starting to operate the truck:

(a) be in operating position;

(b) place directional controls in neutral;

(c) disengage clutch on manual transmission-equipped trucks, or apply brake on power shift or automatic transmission-equipped trucks and electric trucks;

(d) start engine or turn switch of electric truck to ON position.

5.2.2 Do not start or operate the truck, any of its functions or attachments, from any place other than from the designated operator's position.

5.2.3 Keep hands and feet inside the operator's designated area or compartment. Do not put any part of the body outside the operator compartment of the truck.

5.2.4 Never put any part of the body into the mast structure or between the mast and the truck.

5.2.5 Never put any part of the body within the reach mechanism of the truck or other attachments.

5.2.6 Understand truck limitations and operate the truck in a safe manner so as not to cause injury to personnel. Safeguard pedestrians at all times.

(a) Do not drive a truck up to anyone standing in front of an object.

(b) Ensure that personnel stand clear of the rear swing area before conducting turning maneuvers.

(c) Exercise particular care at cross aisles, doorways, and other locations where pedestrians may step into the path of travel of the truck.

5.2.7 Do not allow anyone to stand or pass under the elevated portion of any truck, whether empty or loaded.

5.2.8 Do not permit passengers to ride on powered industrial trucks unless a safe place to ride has been provided by the manufacturer.

5.2.9 A powered industrial truck is attended when the operator is less than 25 ft (7.6 m) from the truck, which remains in his view.

5.2.10 A powered industrial truck is unattended when the operator is more than 25 ft (7.6 m) from the truck, which remains in his view, or whenever the operator leaves the truck and it is not in his view.

5.2.11 Before leaving the operator's position:

- (a) bring truck to a complete stop;
- (b) place directional controls in neutral;
- (c) apply the parking brake;
- (d) lower load-engaging means fully, unless supporting an elevated platform;

In addition, when leaving the truck unattended:

- (e) stop the engine or turn off the controls;
- (f) if the truck must be left on an incline, block the wheels;
- (g) fully lower the load-engaging means.

5.2.12 Maintain a safe distance from the edge of ramps, platforms, and other similar working surfaces. Do not move railroad cars with a powered industrial truck.

5.2.13 Do not use a truck for operating or closing railroad car doors, unless the truck utilizes a device specifically designed for opening and closing railroad car doors and the operator is trained in its use.

The design of the door-opening device shall require the truck to travel parallel to the railroad car, with the force applied in a direction parallel with the door travel. Care should be exercised when engaging the door opening device with the railroad car door, in order to prevent damage to the doors and/or fork truck by heavy impact forces. The entire door opening operation shall be in full view of the operator. The fork truck shall always be positioned to safeguard the dock attendant while removing the door lock pin. Whenever a railroad car door requires an abnormal force to open, the truck operator shall report the condition to his supervisor or as instructed.

5.2.14 When powered industrial trucks are driven on and off highway trucks or trailers, the brakes on the highway trucks or trailers shall be applied and wheel chocks or other positive mechanical means shall be used to prevent unintentional movement of highway trucks and trailers.

Whenever powered industrial trucks are driven on and off semitrailers that are not coupled to a tractor, supports may be needed to prevent upending or corner dipping.

5.2.15 Provision shall be made to prevent railroad cars from being moved during loading and unloading. Wheel stops, hand brakes, or other recognized positive means shall be used to prevent movement of railroad cars during loading and unloading.

5.2.16 Care shall be taken not to contact overhead installations such as lights, wiring, pipes, sprinkler systems, etc.

5.2.17 An overhead guard shall be used on all high lift rider trucks as protection against falling objects, unless all of the following conditions are met:

(a) vertical movement of the lifting mechanism is restricted to 72 in. (1800 mm) or less from the ground.

(b) the truck will be operated only in an area where:

(1) the bottom of the top tiered load is not higher than 72 in. (1800 mm), and the top is not more than 120 in. (3000 mm) from the ground when tiered;

(2) only stable, and preferably interlocked, unitized, or containerized, loads are handled;

(3) there is protection against falling objects from adjacent, high stack areas. An overhead guard is intended to offer protection from falling objects but cannot protect against every possible impact. It should not be considered a substitute for good judgment and care in load handling.

(c) The truck is marked to identify where it can be operated.

5.2.18 A load backrest extension shall be used when necessary to guard against a load, or part of it, from falling toward the operator.

5.2.19 In areas classified as hazardous, use only trucks approved for use in those areas.

5.2.20 Report all accidents involving personnel, building structures, and equipment to the supervisor or as directed.

5.2.21 Do not add to, or modify, the truck.

5.2.22 Do not block access to fire aisles, stairways, or fire equipment.

5.2.23 Motorized hand trucks shall not be ridden unless they are of the hand/rider design.

5.2.24 Whenever a truck without controls that are elevatable with the lifting carriage or forks is used to elevate personnel:

(a) the platform attachment means are applied and the platform is securely attached to the lifting carriage or forks;

(b) be certain that the lifting mechanism is operating smoothly throughout its entire lift height, both empty and loaded, and that all lift limiting devices and latches, if provided, are functional;

(c) the mast is vertical — do not operate on a side slope;

(d) the platform is horizontal and centered and not tilted forward or rearward when elevated;

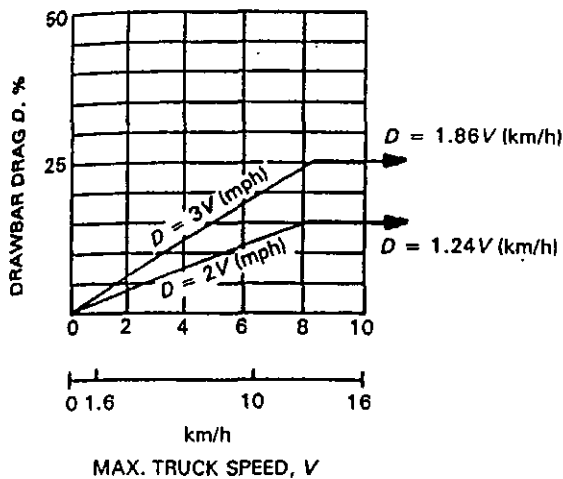


FIG. 1 SERVICE BRAKE PERFORMANCE REQUIREMENTS

(b) for high lift order picker trucks:

$$D = 2V \text{ (mph)}$$

$$D = 1.24V_1 \text{ (km/h)}$$

but not required to exceed 15%

D = drawbar drag, as determined from Fig. 1, as a percent (e.g., 25 for 25%).

V = travel speed of the loaded truck, mph

V_1 = travel speed of the loaded truck, km/h

(b) *Stopping Distance Method.* Determine that the brakes will stop the loaded truck within the required distance, measured from the point of brake application, calculated from the following formulas:

$$s = \frac{3.34v^2}{D} \quad \text{or} \quad s_1 = \frac{0.394v_1^2}{D}$$

where

s = approximate theoretical stopping distance, ft

v = speed, mph

D = drawbar drag, as determined from Fig. 1, as a percent (e.g., 25 for 25%)

s_1 = approximate theoretical stopping distance, m

v_1 = velocity, km/h

7.14.6 Strength

(a) For trucks having a downward movement of brake pedal to apply the service brake(s), the system shall be capable of withstanding a brake pedal force of 300 lb (1335 N) without failure of any component.

(b) For trucks having an upward movement of the brake pedal to apply the service brake(s), a force of 200% of the maximum possible setting of the spring shall not cause failure of any component.

(c) For trucks having hand grip (squeeze) operated brake(s), the system shall be capable of withstanding a force of 160 lb (715 N) at the midpoint of the brake handle.

7.15 Parking Brake System Performance for Trucks Up to and Including 70,000 lb (31 750 kg) Loaded Truck Weight

7.15.1 A parking brake (or mechanism) which may be a part of, or include, the service brake, shall be provided and be capable of holding the truck on the maximum grade that the truck can climb with rated capacity load, or on the following grade, whichever is the lesser:

(a) order picker, high lift — 5%

(b) order picker, low lift — 10%

(c) motorized hand and hand/rider — 10%

(d) sit-down rider, electric or combustion powered — 15%

(e) stand-up rider, electric or combustion powered — 15%

7.15.2 The parking brake system shall be capable of maintaining the specified performance requirement despite any contraction of the brake parts, exhaustion of the source of energy, or leakage of any kind.

7.15.3 The parking brake system shall be manually operable by hand or foot from the normal operating position or automatically applied by leaving the normal operating position. Trucks with only nonautomatically applied brakes shall have a warning to the operator to apply brakes before leaving truck.

7.15.4 Brakes may be burnished prior to test.

7.16 Travel Direction Control(s) Marking

7.16.1 Forward and reverse direction control(s) shall be clearly and durably identified on the control or in close proximity.

7.17 Travel Controls — Electric Trucks, Sit-Down Rider

7.17.1 Means shall be provided so that the travel circuit can be activated only by resetting the speed and directional control(s) when the operator assumes the operating position. A positive neutral position or control shall be provided.

(a) Directional Control — Hand Operated

(1) Motion of control away from the operator shall move the truck with load end leading.⁴

(2) Motion of control toward the operator shall move the truck with load end trailing.⁴

(b) *Travel Speed Selector.* Travel speed selector shall be conveniently located. The speed selection pattern shall be durably and clearly identified.

(c) Combination — Travel Speed and Direction Controls With One Pedal or Two Pedals Side by Side

(1) Forward or downward motion on left or forward portion shall move truck with load end leading.⁴

(2) Forward or downward motion on right or rear portion shall move truck with load end trailing.⁴

(3) Forward and/or downward motion of either portion shall increase speed.

(4) Pedals for side-seated operators shall be directional.⁵

(d) Combination — Travel Speed and Direction Controls With Two Pedals, Separated by the Service Brake Pedal

(1) Right pedal shall move truck with load end leading.⁴

(2) Left pedal shall move truck with load end trailing.⁴

(3) Depressing either pedal shall increase speed.

(4) Pedals for side-seated operators shall be directional.⁵

7.17.2 Means shall be provided to disconnect the travel circuit automatically when the operator leaves the operating position.

7.17.3 A manually operated switch (may be key type) to disconnect all control circuits shall be provided.

7.17.4 Service brakes shall be operable with the right foot and be depressed to apply.

7.17.5 Motor speed control shall be either right-hand or right-foot operated. If control is hand operated, motion shall be forward or up to increase speed. If control is foot operated, depress to increase speed.

7.17.6 If a single pedal controls both acceleration and braking, downward motion of the pedal shall in-

crease speed, releasing the pedal shall apply brakes, and the pedal shall be located for right-foot operation.

7.17.7 Means readily accessible to the operator in the normal operating position shall be provided to shut off all power to the truck.

7.18 Travel Controls — Electric Trucks, Stand-Up Rider

7.18.1 Means shall be provided so that the travel circuit can be activated only by resetting the speed and/or directional control(s) when the operator assumes the operating position.

7.18.2 Means shall be provided to disconnect the travel circuit automatically when the operator leaves the operating position.

7.18.3 A manually operated switch (may be key type) to disconnect all control circuits shall be provided.

7.18.4 Service brakes may be actuated by either an upward or downward motion.

7.18.5 Means readily accessible to the operator in the normal operating position shall be provided to shut off all power to the truck.

7.19 Travel Controls — Internal Combustion-Powered Industrial Trucks, Sit-Down Rider

7.19.1 Travel controls shall be so arranged that power will be applied to the wheels only when the transmission or direction control has been actuated. A positive neutral position or control shall be provided.

(a) Directional Control — Hand Operated

(1) Motion of control away from the operator shall move truck with load end leading.⁴

(2) Motion of control toward operator shall move truck with load end trailing.⁴

EXCEPTION: An acceptable alternative is a properly labeled "H" pattern.

(b) *Travel Speed Selector.* Travel speed selector shall be conveniently located. The speed selection pattern shall be durably and clearly identified.

(c) Combination — Travel Speed and Direction Controls With One Pedal or Two Pedals Side by Side

(1) Forward or downward motion on left or forward position shall move truck with load end leading.⁴

(2) Forward or downward motion on right or rear portion shall move truck with load end trailing.⁴

(3) Forward and/or downward motion of either portion shall increase speed.

⁴On trucks with "turn-around operator stations," the controls for the normal operator position (facing load end) shall conform to this Standard. For hand-operated directional controls, motion of the control shall be in the same direction as truck travel.

⁵For side-seated operators, the pedal or portion of the pedal toward the load end of the truck shall move truck with load end leading and the pedal or portion of the pedal away from the load end shall move truck with load end trailing.

(3) minimum capacity of truck on which the platform can be used.

7.35.4 Trucks used for elevating personnel shall have:

(a) When controls are supplied for use on the elevating platform, they shall be readily accessible to the operator and protected from damage and inadvertent actuation. Provision to shut off power to the truck shall be provided. An emergency lowering means operable from the ground shall be provided for overriding the controls on the platform.

(b) Hydraulic or pneumatic hoisting systems shall include means to prevent unintended descent in excess of 120 ft/min (0.6 m/s) in event of a hose failure.

7.36 Radiator Caps

All pressurized, liquid-cooled, internal combustion engine-powered trucks shall have safety-type radiator caps such that a pressure relief step precedes the complete removal step.

7.37 Fork Extensions

7.37.1 Fork extensions should not be longer than 150% of the supporting fork's length (see Fig. 7).

7.37.2 Each fork extension shall be capable of supporting a uniformly distributed, or equivalent load of 3 times its rated capacity when mounted on a fork of the specified size.

No permanent deformation shall be produced by the application of this test load after having removed the effects of any local manufacturing irregularities by up to 3 preliminary applications of the test load.

7.37.3 For purpose of rating, the rated load center of the fork extension should be at 50% of the fork extension load supporting length.

7.37.4 Each fork extension shall be clearly stamped with its individual load rating and supporting fork size in an area readily visible and not subject to wear. For example, 1500 × 30 — 2 × 4 × 42 means a 1500 lb load at a 30 in. load center with a recommended supporting fork size 2 in. × 4 in. and not less than 42 in. long; or, for example, 2000 × 600 — 80 × 180 × 800 means a 2000 kg load at a 600 mm load center with a

recommended supporting fork size of 80 mm × 180 mm and not less than 800 mm long.

7.37.5 Fork extensions shall be designed to avoid unintentional disengagement from the forks. Lateral clearance shall not exceed ½ in. (13 mm) between fork and extension.

7.38 Battery Restraint for High Lift Rider Electric Trucks Up to and Including 12,000 lb Rated Capacity (Excluding High Lift Man-Up Trucks and High Lift Order Picker Trucks)

7.38.1 Means shall be provided, as part of the truck, to restrain the battery in a vertical and longitudinal direction so that if truck tipping should occur, the battery will not move more than 4 in. (100 mm) into the space normally occupied by the operator or move more than 4 in. (100 mm) in a lateral direction beyond the plan view outline of the truck.

7.38.2 The restraining means shall restrict the battery displacement within the required limits when up to a maximum 90 deg. overturn is simulated by allowing a static truck to fall free from its critical balance point impacting on a horizontal plane. The movement of the battery shall not interfere with the operator's egress from the truck.

7.39 Operator Restraint Systems

(a) Counterbalanced, center control, high lift trucks that have a sit-down, nonelevating operator position shall have a restraint device, system, or enclosure that is intended to assist the operator in reducing the risk of entrapment of the operator's head and/or torso between the truck and ground in the event of a tipover. Such means shall not unduly restrict the operation of the truck, e.g., the operator's mounting, dismounting, movement, and/or visibility.

(b) Warnings and instructions on the purpose and use of the operator protection provided shall be displayed in clear view on the truck and included in the operator's manual.

7.40 Sound

Sound testing, when conducted, shall be in accordance with the test procedures of ASME B56.11.5.

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CERTIFICATE OF SERVICE

I, LeAnn W. Nealey, one of the attorneys for Appellee, hereby certify that I have this day caused to be served a true and correct copy of the above and foregoing to the following:

John F. Hawkins, Esquire
John P. Scanlon, Esquire
HAWKINS, STRACENER & GIBSON
P.O. Box 24627
Jackson, MS 39225-4627

John Griffin Jones, Esquire
JONES & FUNDERBERG
901 North State Street
Post Office Box 13960
Jackson, MS 39236-3960

ATTORNEYS FOR PLAINTIFF/APPELLANT

James Holland, Esquire
Pelecia Everett Hall, Esquire
Page, Kruger & Holland, P.A.
10 Canebrake Blvd, Ste 200
Post Office Box 1163
Jackson, MS 39215-1163

ATTORNEYS FOR BURKE HANDLING SYSTEMS, INC.

Bridgette Thomas, Esquire
Markow Walker
599 Highland Colony Pkwy, Ste. 100
P.O. Box 13669
Jackson, MS 39236-3669

**ATTORNEY FOR INTERVENOR ST PAUL FIRE
AND MARINE INSURANCE COMPANY**

Honorable W. Swan Yerger
Hinds County Circuit Court Judge
407 E. Pascagoula Street
Post Office Box 327
Jackson, MS 39205-0327

CIRCUIT COURT JUDGE

THIS, the 14th day of March, 2008.



LeAnn W. Nealey

CERTIFICATE OF FILING

I, LeAnn Nealey, certify that I have had hand-delivered the original and three copies of the Brief of Appellee Doosan Infracore America Corporation, f/k/a Daewoo Heavy Industries America Corporation and an electronic diskette containing same on March ¹⁹, 2008, addressed to Ms. Betty W. Sephton, Clerk, Supreme Court of Mississippi, 450 High Street, Jackson, Mississippi 39201.


LEANN W. NEALEY

Jackson 2616526v.1