ASME B56.6 Interpretations

Replies to Technical Inquiries
March 1992 — April 1996

FOREWORD

This publication includes all of the written replies issued between the indicated dates by the Secretary, speaking for the ASME B56 Committee on Powered and Nonpowered Industrial Trucks, to inquiries concerning interpretations of technical aspects of ASME B56.6, Safety Standard for Rough Terrain Forklift Trucks.

These replies are taken verbatim from the original letters except for a few typographical corrections and some minor editorial corrections made for the purpose of improved clarity. In some few instances, a review of the interpretation revealed a need for corrections of a technical nature; in these cases a corrected interpretation follows immediately after the original reply.

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Interpretation: 6-12

Subject: ASME B56.6-1992, Paras. 8.5.5 and 8.6.8.7

Date Issued: March 29, 1995

Question (1): Does para. 8.5.5 require two separate load capacity charts for a transportable, vertical mast, reach-type rough terrain forklift equipped with stabilizers that includes ratings for when the stabilizers are extended and retracted?

Reply (1): Yes. Paragraph 8.5.5 requires that information be provided for load capacity both with and without the stabilizers in position. This information may be as a conventional load rating chart, or may be as a warning label on the truck that states that there is no load capacity with the stabilizers retracted. In addition, para. 8.6.8.9(e) requires that Test 3 be completed.

Question (2): Paragraph 8.6.8.7 outlines the procedure for conducting stability Test 1 for a rough terrain forklift equipped with stabilizers. Is stability testing required without engaging stabilizers if the forklift operating instructions clearly indicate that the load should not be extended or raised without engaging the stabilizers?

Reply (2): Paragraphs 8.6.8.7 and 8.6.8.9(e) require that Tests 1 and 3 be completed both with and without stabilizers for all types of rough terrain forklifts.

Interpretation: 6-13

Subject: ASME B56.6a-1994

Date Issued: January 18, 1996

Question (1): What is the mast tilt angle when conducting Test 1 for a vertical mast forklift with scissor-type fork extension?

Reply (1): Test 1 is to be conducted with the mast vertical. Corrections to vertical may be made to compensate for flexing of the mast assembly by using the plumb line method or the transit method as outlined in para. 8.6.8.7(a)(2)(a).

Question (2): Is a vertical mast forklift with a scissor-type longitudinal extension of the forks considered a vertical mast or variable reach forklift for the stability test?

Reply (2): This type of forklift is considered a vertical mast forklift for the stability test requirements.

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Interpretation: 6-14

Subject: ASME B56.6-1992, Para. 5.15.1(c); Elevating Personnel

Date Issued: April 12, 1996

Question: Regarding the subject paragraph, and in specific the sentence "Be certain that the lifting carriage and forks are secured to prevent them from pivoting upward," please provide an interpretation of hazards involved and an explanation as to under which circumstances this sentence is applied.

Reply: The statement "Be certain that the lifting carriage and forks are secured to prevent them from pivoting upward" is intended to provide a stable work platform mounting.

Rough terrain forklifts commonly use shaft or pin-type forks that are unrestrained from pivoting about the fork mounting shaft. If the work platform or the fork tips encounter an obstruction while the work platform is being lowered, a platform mounted to shaft forks could rotate about the fork pin and cause injury to the personnel on the platform.

This statement is provided to require that the forks be restrained in a manner that will not allow the forks to rotate about the fork pins. Hook-type forks meet this criterion by design and are not a cause for concern for this condition.

The lifting carriage is included in this statement for the same reason. The carriage must be prevented hydraulically or mechanically from inadvertently rotating backward with a work platform installed. It would be very unusual for current production forklifts to have a carriage that would not be restrained from freely rotating under any condition.

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Interpretation: 6-8

Subject: ASME/ANSI B56.6-1987

Date Issued: March 6, 1992

Question: With regard to para. 8.7.8, what is the definition of *energy* as used in this context?

Reply: Paragraph 8.7.8 states that "A service braking system using stored energy shall be equipped with a warning device which actuates before stored energy drops below 50% of the manufacturer's specified maximum operating energy level."

Stored energy is intended to be the *potential* energy of the brake system. For example, in a hydraulic brake system using a gas charged accumulator precharged to 750 psi for a system operating pressure of 1500 psi, the warning device could be required to actuate at 1246 psi operating pressure (assuming an isothermal ideal gas process and depending on the size of the accumulator).

The warning device must actuate before the brake system pressure drops to 50% of the operating pressure since the potential energy stored in the accumulator(s) would be completely exhausted at this level.

This stored energy requirement does result in a narrow operating range for the brake system and this concern will be addressed at the next meeting of the B56.6 Subcommittee.

Interpretation: 6-9

Subject: ASME/ANSI B56.6-1987

Date Issued: June 1, 1992

Question: With regard to para. 8.17.1, is it intended that the applied load remain perpendicular to the truck, or to the operator compartment, when conducting the operator compartment bending test?

Reply: The initial direction of loading shall be applied perpendicular to the longitudinal member and toward the longitudinal centerline of the truck. As loading continues, the operator compartment deformations may cause the direction of loading to change; this is permissible. This area of the standard is currently being reviewed for possible clarification.

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Interpretation: 6-10

Subject: ASME/ANSI B56.6-1987

Date Issued: December 17, 1992

Question (1): Has the committee addressed the subject of one side egress on this class of forklifts?

Reply (1): One side egress has not been addressed by the committee. This topic will be added to the agenda for the next B56.6 Subcommittee meeting.

Question (2): Is the committee now reviewing the blindness to the rear of many rough terrain forklifts?

Reply (2): Rear visibility is being addressed in the subcommittee. There is a new standard ASME B56.11.6, Evaluation of Visibility from Powered Industrial Trucks, that has recently been published. This standard describes front, side and rear visibility requirements. Incorporation of the new ASME B56.11.6 Standard into ASME B56.6, Safety Standard for Rough Terrain Forklift Trucks, will also be an agenda item for the next meeting of the B56.6 Subcommittee.

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Interpretation: 6-11

Subject: ASME/ANSI B56.6-1987 (including Addenda)

Date Issued: January 27, 1993

Question (1): With regard to para. 8.25.1(b), when determining the maximum platform floor dimensions, did the B56 Committee consider larger work platforms designed by qualified persons such as original equipment manufacturers or professional engineers to ensure stability and find these an unacceptable alternative and if so, for what reasons?

Reply (1): The B56.6 Subcommittee has carefully considered platform floor dimensions for work platforms designed by qualified persons including platforms designed by the original equipment manufacturers as defined in Section 8 of Part III of this standard. The Subcommittee has determined that under no conditions should the maximum platform width exceed 10 inches wider than the width of the tires, nor should the maximum front to back dimension be greater than two times the load center distance as indicated on the forklift nameplate.

The reason for this restriction is based on the fact that rough terrain forklifts typically have lift heights exceeding 30 feet and are designed to operate on unimproved surfaces. These floor dimensions were developed to limit the effect on truck stability of personnel moving, or equipment being moved, around on the elevated platform.

Question (2): With regard to para. 8.25.1(g), is the intent of this paragraph to require provision to shut off power to the rough terrain forklift truck when controls are not supplied for use on the elevating platform as well as when they are supplied and if not, for what reasons?

Reply (2): If the controls are not elevatable with the lifting carriage or forks, there is no requirement to have means whereby personnel on the elevating platform can shut off power to the truck. The truck must not be modified to provide such means without the involvement of the manufacturer per paragraph 5.2.1.

When motion controls are not provided on the platform, the responsibility lies with the forklift operator to determine when it is necessary to shut off power to the truck and do so when required. Both operator and platform personnel responsibilities are detailed in Part II, Section 5.15 of the standard.

Control responsibility must not be divided between the forklift operator and the personnel on the platform. This is to eliminate confusion regarding control of the forklift functions if there is an emergency (i.e., the forklift operator may determine that the motion controls must be actuated to avoid some danger, and be unable to do so if the platform personnel have shut off the engine).

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