

Science Olympiad 2014 Boomilever B

Supervisors will record this information for each team & each team is encouraged to use this form as a **pre-tournament Checklist!**

Supervisors can also record team results on the excel Boomilever spreadsheet found at www.soinc.org

Team Number: B___ Team Name: _____ Rank: _____

Student Names: _____ Final Score: _____

Construction Parameters

3.a. The Boomilever is a single structure designed to attach to 1 to 3 mounting hook(s) in the Testing Wall, support a Loading Block with a load up to 15.0 kg at a distance from the Wall. Y N

3.b. The Boomilever does not touch the Testing Wall at any time more than 20.0 cm below the center of the holes for the hook(s) Y N

3.c. The center of the Loading Block, measured horizontally from the face of the Testing Wall, is between 45.0 cm and 50.0 cm and approximately centered horizontally on the Testing Wall. Y N

3.d. The Loading Block is supported at a height no lower than 5.0 cm below the Contact Depth line before loading the sand. Y N

3.e. The Boomilever is attached by means of the mounting hook(s) in the Testing Wall and is able to be set up for testing without adjusting the mounting hook(s). Y N

3.f. The Boomilever does not attach or hook to any edge of the Testing Wall. All tensile and shear connection to the Testing Wall is through the mounting hook(s). Y N

3.g. All parts of the Boomilever are constructed only of wood and bonded only by adhesive. Y N

3.i. Adhesive tapes are not used. Y N

ALL CONSTRUCTION PARAMETERS MET (IF N, TIER 3) **1. Y N**

Competition Parameters

5.a. No alterations, substitutions, or repairs are made to the Boomilever after check-in. Team does not leave or receive outside assistance, materials, or communication once teams enter the event area to compete. Y N

5.e. Team attaches their Boomilever to the Testing Wall using the mounting hook(s) and does not adjust the mounting hook(s). Team assembles the Loading Block assembly, eyebolt, chain and/or S-hook, and hangs the bucket to load the Boomilever. Y N

5.f. The Loading Block is within the specified range from the Testing Wall. Y N

5.h. Team does not make any adjustments after sand loading has begun. Y N

5.i. Teams do not directly contact the bucket; they only stabilize the bucket with the bucket stabilization sticks. Y N

ALL COMPETITION PARAMETERS MET (IF N, TIER 2 OR LOWER) **2. Y N**

Other

6.c.iv. Participation Points Only (Boomilever unable to be loaded for any reasons) **3. Y N**

General Rule 9. Disqualified (notify the team and their coach as soon as possible) **4. Y N**

Boomilever Measurements

6.a. Boomilever mass (in grams to the closest 0.01g) **5. _____**

6.a. Load supported (in grams to the closest 1g; 15,000 g max) **6. _____**

6.d. Contact Depth prior to loading (in cm to the closest 0.1cm) **7. _____**

Score = Load / Mass

1st tie breaker = Lowest Boomilever Mass, 2nd tie breaker = Least Contact Depth prior to loading