

## 1.0 PURPOSE

This Standard Test Procedure is used by the Electrical Safety Division when the size of a lens, or access to the lens, is such that the 1" hemispherical striking surface of the drop weight described in 30 CFR, Section 18.66(a) cannot contact the lens.

## 2.0 SCOPE

This Standard Test Procedure encompasses explosion-proof enclosures submitted to MSHA for approval under 30 CFR, Part 18.

## 3.0 REFERENCES

30 CFR Section 18.66(a).

## 4.0 DEFINITIONS

None

## 5.0 TEST EQUIPMENT

5.1. Drop weight Test Apparatus (see Figure 1)

5.2. Restricted Access Accessory (see Figure 2)

5.3. Support

5.4. Measuring rod or ruler

## 6.0 TEST SAMPLES

Four (4) samples of the lens to be tested. The test shall be conducted with the sample assembled in the frame or assembly in which it is used. No "equivalent thereof" samples or assemblies shall be used.

## 7.0 PROCEDURES

7.1. Verify that the lens is assembled in accordance with the manufacturer's assembly instructions.

7.2. Mount and position the lens holder in the drop weight test Apparatus. The center of the lens shall be the point of impact.

**TITLE: Restricted Access Lens Impact Test****MSHA Mine Safety and Health Administration, Approval & Certification Center**

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- 7.3. Mount the drop weight in the drop weight test apparatus.
- 7.4. Position the Restricted Access Accessory in the support. The support cannot grip the accessory; it may only keep it in alignment
- 7.5. Using a measuring rod or ruler, adjust the height of drop as per the following table:

Lens diameter, (D), inches	Height of fall, inches
$D < 4$	6
$4 \leq D < 5$	9
$5 \leq D < 6$	15
$6 \leq D$	24

- 7.6. This shall be the distance between the striking surface of the drop weight and the top of the Accessory.
- 7.7. Perform the drop test on each of the four lenses as specified in Part 18.

Record all results on the Impact Test Form (see Appendix 1).

**8.0 TEST DATA**

- 8.1. Sample number
- 8.2. Height of drop
- 8.3. Results/observations.

**9.0 PASS/FAIL CRITERIA**

- 9.1. Samples shall not exhibit breakage.

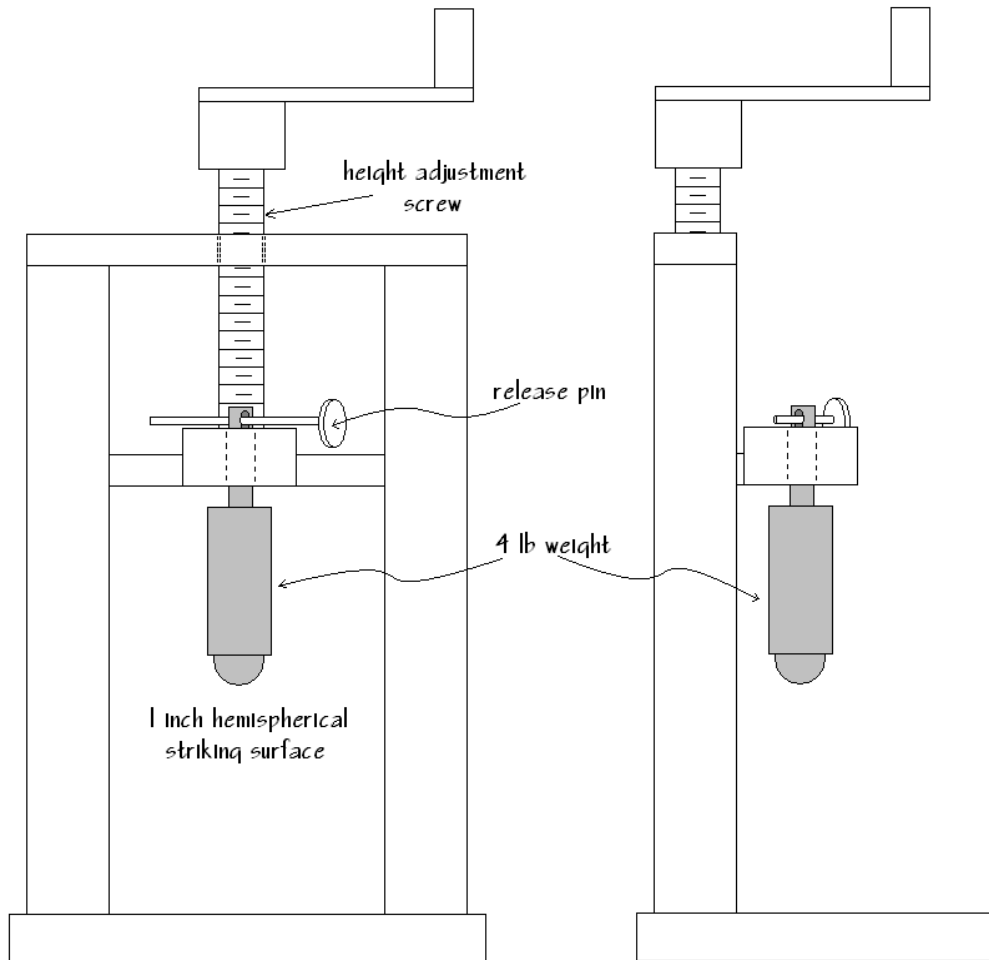


Figure 1 - Drop Weight Test Apparatus

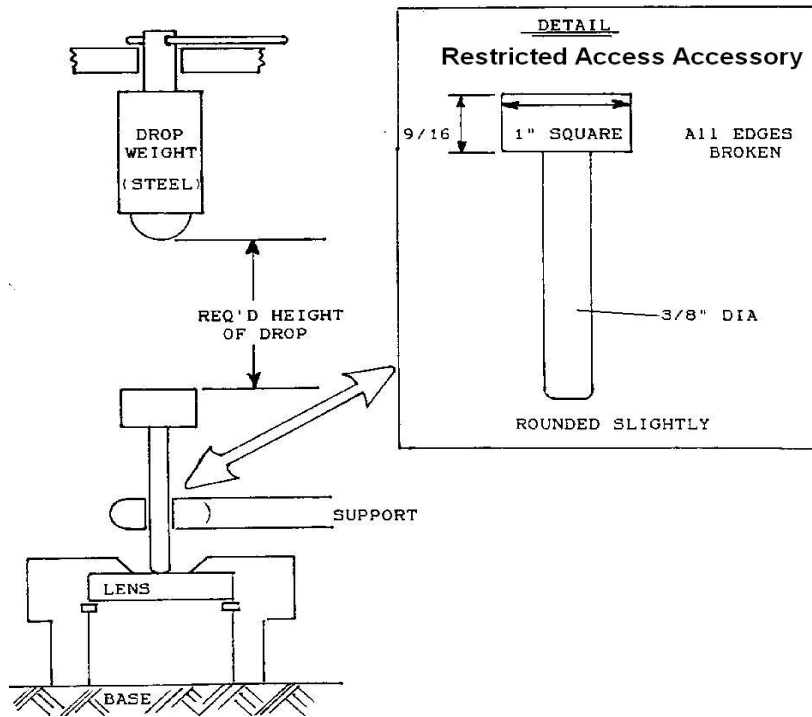


Figure 2

Appendix 1

U.S. Department of Labor  
Mine Safety and Health Administration  
Approval and Certification Center  
Electrical Safety Division  
Triadelphia, WV 26059

Date: \_\_\_\_\_ MR: \_\_\_\_\_

To: \_\_\_\_\_ PAR: \_\_\_\_\_

From: \_\_\_\_\_ MFG: \_\_\_\_\_

Enclosure Type: \_\_\_\_\_

Subject: Impact Tests of Windows and Lenses

Reference: Title 30 CFR, Part 18.66(a), ASTP2132, ASTP2136

Window/Lens Material

Dimension:

Holder Style:

Sample	Height of Drop	Results

Comments: