

Standard Guide for Reduction of Risk of Injury for Archery Overdraws¹

This standard is issued under the fixed designation F 1363; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This guide covers the function of archery overdraws and suggests a limited number of geometric configurations that could decrease the potential risk of injury to the archer.

1.2 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

2. Terminology

2.1 *Definitions of Terms Specific to This Standard:*

2.1.1 *acceptable overdraw*—an acceptable configuration of an archery bow overdraw should provide partial or full containment for the arrow if the arrow becomes disengaged from the arrow rest.

2.1.2 *archery overdraw*—any design configuration, integral or added, that permits the extreme forward tip of an arrow to be drawn past the pivot point of the hand grip.

3. Significance and Use

3.1 This guide covers only the most obvious areas of overdraw safety.

3.2 This guide is not intended as a comprehensive analysis of the subject.

4. Arrow Containment

4.1 *Vertical Plane:*

4.1.1 In the vertical plane, Fig. 1 shows that increasing levels of arrow enclosure will provide increasing levels of arrow containment.

4.1.2 A higher degree of arrow containment may be achieved by the position in Fig. 1(D) than by that in Fig. 1(A).

4.2 *Horizontal Plane:*

4.2.1 It must be recognized that an arrow can be drawn past the support of the arrow rest, regardless of the type of bow and whether or not it has an overdraw. This condition is dependent on the length of the arrow and lies entirely within the control

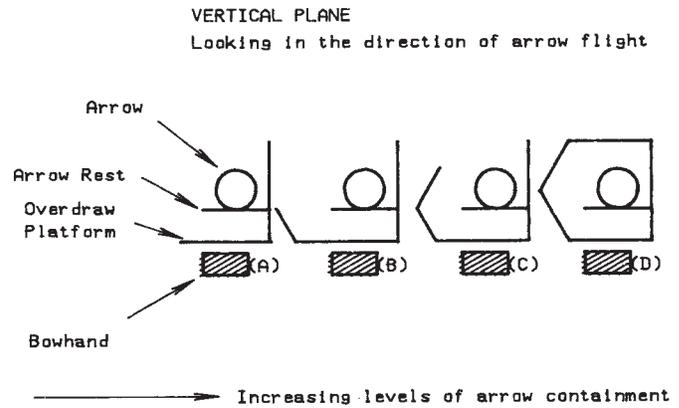


FIG. 1 Increasing Levels of Arrow Containment, Vertical Plane

of the individual archer. The length of the arrow must be selected so that the arrow will not be drawn past the arrow rest. It is generally possible, within functional limits, to provide some hardware design to further guard against the possible hazard from negligence on the part of the user.

4.2.2 The location of the arrow rest in relation to the aft end of overdraw is shown in Fig. 2.

4.2.3 An arrow rest placed at the extreme aft end of the overdraw (Fig. 2(C)) may allow the arrow to fall off the rest if an archer draws past his or her draw length.

4.2.4 The arrow rest location at the forward end of the platform is shown in Fig. 2(A). In this location the arrow disengagement from the rest should be contained by the platform to a greater degree than in Fig. 2(C).

4.3 *Arrow Containment Methods Without Full Enclosure of the Arrow:*

4.3.1 A relatively wide horizontal plate extending beyond the wrist and knuckles of the bow hand may provide adequate arrow containment if the arrow disengages from the rest (Fig. 3).

4.3.2 A relatively high vertical plate left of the arrow (for a right-handed archer) may provide adequate containment for an arrow raised upward from the arrow rest (Fig. 4).

4.3.3 It should be noted that most overdraw designs are a combination of Figs. 3 and 4 to some extent, and they provide various degrees of arrow containment.

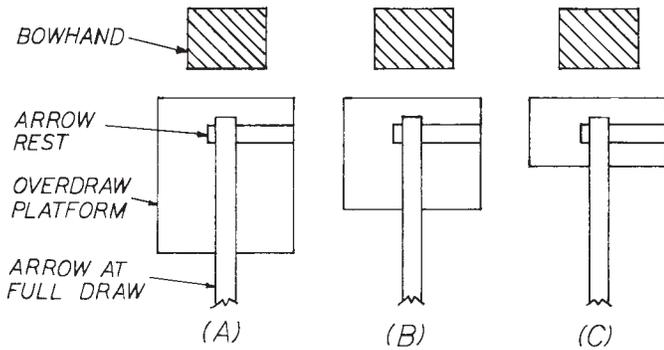
5. Suggested Guidelines

5.1 *Vertical Plane:*

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HORIZONTAL PLANE
LOOKING DOWN ON THE ARCHER



INCREASING LEVELS OF ARROW
DISENGAGEMENT →

FIG. 2 Increasing Levels of Arrow Disengagement, Horizontal Plane

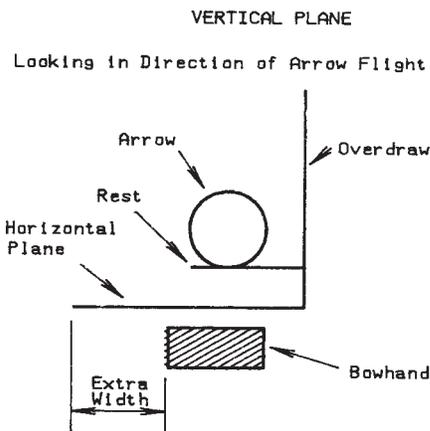


FIG. 3 Extended Width of the Horizontal Plate

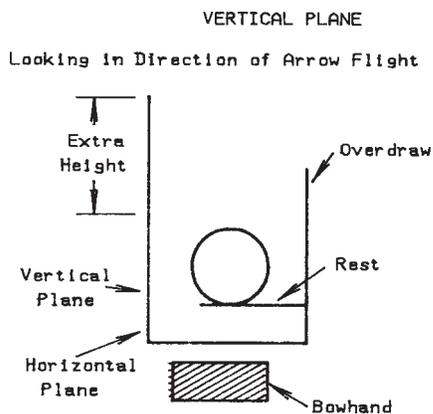


FIG. 4 Extended Height of the Vertical Plate

5.1.1 An open system with a relatively high vertical plate could provide adequate levels of arrow containment (Fig. 4), should the arrow become disengaged from the rest.

5.1.2 A fully enclosed overdraw system that surrounds the arrow would shelter the arrow circumferentially at all points in the vertical plane (Fig. 5) and provide a still greater degree of arrow containment.

VERTICAL PLANE

Looking in the Direction of the Arrow Flight

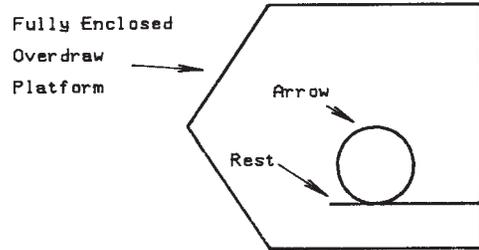


FIG. 5 Fully Enclosed Overdraw System

HORIZONTAL PLANE

Looking Down on the Archer

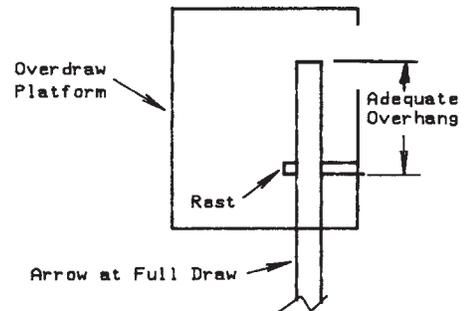


FIG. 6 Adequate Overhang of the Arrow Relative to the Rest

5.2 Horizontal Plane:

5.2.1 In the horizontal plane (looking down on the archer), an arrow might be disengaged from the arrow rest, even in a fully vertically enclosed system.

5.2.2 The length of an arrow overhanging in front of the rest at full draw should be long enough to prevent disengagement of the arrow if the archer pulls past his or her draw length (Fig. 6). On a compound bow, this distance may be made equal to or greater than the maximum distance that the bow can be reasonably drawn. An extra-long arrow would give a greater degree of arrow containment.

6. Overdraws on Bows without Draw Stops or Defined Valleys in the Force-Draw Characteristics

6.1 Such bows can be drawn further than compound bows past their recommended draw length. An adequate arrow overhang for a compound bow may not be sufficient for a recurve bow.

7. Alignment of Overdraws With Sight Window and Bow Shelf

7.1 To minimize the possibility of arrow impact against the bowhandle, it is critical that the horizontal plate of the overdraw be in line with or higher than the bow shelf. It is also suggested that the side plate be in line with or to the left of the sight window (for right-handed shooters) (Fig. 7).

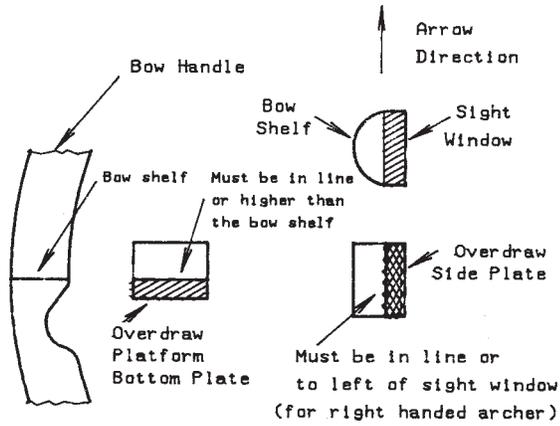


FIG. 7 Alignment of Overdraws

8. Instructions

8.1 It is suggested that the manufacturer issue instructions with each overdraw unit stating that the recommended length of overhang from the rest for an arrow is a minimum of one inch.

9. Keywords

9.1 arrow; bow shelf; containment; overdraw; sight window

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