



Standard Specification for Designation of the Balance Point Location for Archery Arrows¹

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1. Scope

1.1 This specification covers the method of determining and designating the location of the balance point of an arrow assembly for use with an archery bow.

1.2 The values stated in inch-pound units are to be regarded as the standard. The values given in parentheses are for information only.

2. Terminology

2.1 Definitions of Terms Specific to This Standard:

2.1.1 *Archery Manufacturer's Organization (AMO), n*—the archery industry manufacturer's organization that has originated some standardized terms and configurations that are accepted and used universally.

2.1.2 *AMO arrow length, n*—the length dimension from the bottom of the nock slot forward to a designated point near the front or leading end of the arrow assembly. The designated point varies to accommodate the different designs because of the differences in arrow point design and attachment.

2.1.2.1 For arrows incorporating interchangeable point system inserts and other point or adaptor types that insert into the open forward end of the arrow shaft, the designated point is the front end of the arrow shaft, often referred to as the “cut length” (Fig. 1).

2.1.2.2 For arrows having the front end of the shaft tapered or swaged, the designated point is the most forward extension of the full diameter of the shaft (Fig. 2).

2.1.2.3 For arrows incorporating outserts, the designated point is $\frac{3}{4}$ in. (19 mm) forward of the rearward end of the outsert (Fig. 3).

2.1.2.4 For arrows using heads that have integral cylindrical sockets incorporated within the basic head configuration, the designated point is the rearward end of the socket (Fig. 4).

2.1.3 *arrow point, n*—a general term used to describe any point or head attached to the front end of an arrow.

2.1.4 *balance point, n*—that location along the length of the arrow which, when positioned over a knife edge, will result in

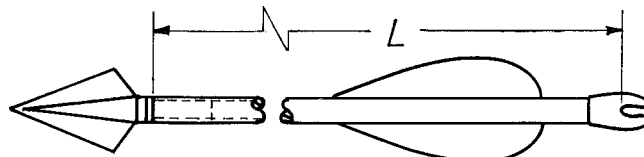


FIG. 1 Arrow Assembly Employing an Interchangeable Point Insert (See 2.1.2.1)

the arrow being in a perfectly balanced condition. It is the longitudinal location of the center of gravity of the arrow assembly.

2.1.5 *front of center (FOC), n*—for good flight characteristics, the balance point or center of gravity of an arrow assembly must be located at some position forward of the longitudinal dimensional center of the arrow. The FOC distance is not a fixed dimension. It can vary with the design of the arrow assembly and its components. It is also not necessarily a precise dimension since satisfactory arrow flight can be

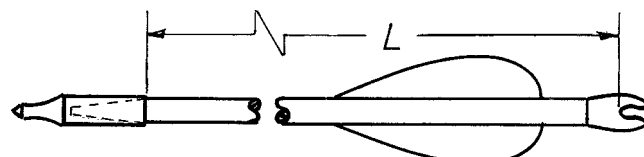


FIG. 2 Arrow Assembly Having the Front End of the Shaft Tapered or Swaged (See 2.1.2.2)

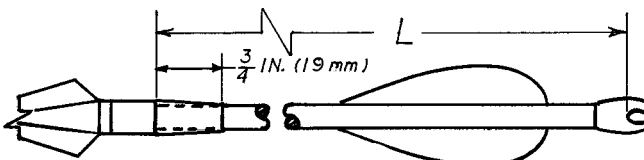


FIG. 3 Arrow Assembly Incorporating an Outsert (See 2.1.2.3)

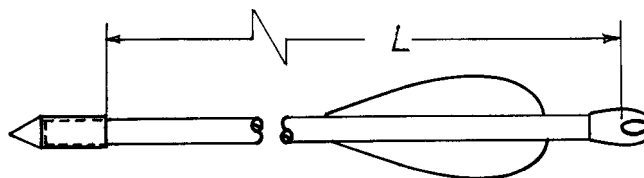


FIG. 4 Arrow Assembly With a Head That Has an Integral Cylindrical Socket (See 2.1.2.4)

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