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# Standard Practice for Identification and Categorization of Tooling[1]

This standard is issued under the fixed designation E2672; 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 practice describes the differentiation, identification, and categorization criteria for tooling, both unique and more general in nature. The physical markings should allow for one or more of the following to be ascertained: part number, serial number, ownership, revision, or symbology, or combination thereof.

1.2 Definitions for the unique subcategories that make up the tooling family will be described. These subcategories help to differentiate tooling categories for use in identification, control, and record keeping.

1.3 This practice is intended to be applicable and appropriate for all entities that hold tooling regardless of ownership or acquisition methodology. This practice further provides the detailed information to provide the flexibility of common nomenclature, identification, and tracking of unique tooling.

1.4 Items not covered but defined by this practice include, but are not limited to: consumable property, special test equipment (STE), plant equipment, general or special machinery equipment, and expendable tools.

1.5 *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, health, and environmental practices and determine the applicability of regulatory limitations prior to use.*

1.6 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

## 2. Referenced Documents

2.1 *ASTM Standards:*[2]

E2135 Terminology for Property and Asset Management

E2279 Practice for Establishing the Guiding Principles of Property Asset Management

## 3. Terminology

3.1 *Definitions*—In addition to the below definitions, also reference Terminology E2135.

3.1.1 *unique tooling, n*—items that are custom made and are of such a specialized nature that without substantial modification or alteration their use is limited to the development or production of particular supplies/product or parts thereof, or performing particular services; usually are accountable and reportable property to a customer contract; also known as *special tooling*. Unique tooling can also be a system comprised of or contains common off-the-shelf items that are integrated together into the unique tool in a manner that provides specialized automated manufacturing capabilities uniquely configured and used to manufacture a certain product or part(s).

3.1.2 Other tooling types:

3.1.3

3.1.3.1 *expendable (tools), n*—property that can be consumed or become scrap as a result of intended use like drill bits.

3.1.3.2 *hand tools, n*—tools that are smaller in size, commercial off-the-shelf products typically stored and controlled by the mechanic/technician that the individual deploys as necessary, often without other administrative controls: hammers, screwdrivers, wrenches, planers, rake, shovels, and so forth; may be powered by hand, battery, electricity, etc.

3.1.3.3 *machined tools, n*—brake dies, joggle dies, joggle blocks, etc., which are usually considered part of or an accessory of the actual machine and not special to one peculiar product.

[1] This practice is under the jurisdiction of ASTM Committee E53 on Asset Management and is the direct responsibility of Subcommittee E53.01 on Process Management.

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[2] For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

3.1.3.4 *standard tooling, n*—commercial off-the-shelf products for use in the manufacturing process (for example, drills, reamers, power saws, riveting tools, etc.); tooling that is often pooled and issued as required for the manufacturing process.

3.2 *Definitions of Terms Specific to This Standard:*

3.2.1 *installation kit tools, n*—installation-type tools that are usually delivered with the product to the customer; typically considered issued material or components of the installation kit.

3.2.2 *manufacturing/shop aids, n*—an aid made for the manufacturing process that is used to assist in the drilling, layout, and positioning of a part (for example, shim, plate, etc.); items of benefit to the mechanic/technician that are typically not called out in the manufacturing specifications.

3.2.3 *tool number, n*—primary identifier/part number, which often matches the part number or product number for which it is used to make.

3.2.4 *tool serial, n*—numerical unique identifier assigned in the manufacturing process of the tool, which becomes a manufacturer's serial number.

3.2.5 *tool series/multi, n*—numerical series used to identify the manufacturing batch or sequence from which this tool was made from; and multi represents the unique line number count of a tool made within a certain series.

3.2.6 *tool symbols, n*—alpha characters that create symbols used to identify a family or a specific type of unique tool that an organization or industry can use to associate like unique tools (for example, "AJ" equals an *assembly jig tool*, "DT" equals a *drill template tool*, etc.).

3.2.6.1 *Discussion*—See Appendix X1 for a partial list of published common unique tool symbols for use.

## 4. Significance and Use

4.1 The categorization and identification of tooling has a wide range of advantages to assist in maintaining an uninterrupted, productive, and cohesive business practice. These include, but are not limited to, identifying operation critical items, increasing tool utilization, and helping to allocate resources and manage production.

4.2 Tooling has a wide range of applications. This practice is intended to clarify the differences between the different groups of tooling and provide identification symbolism for standard communication across industries.

4.3 The identification of unique tooling reflected in this practice will provide inclusive and comparative insight into the availability regardless of ownership or acquisition methodology, tooling type, specifics of its internal assignment and use, or possible future requirements. This identification combination allows the shop floor to identify readily the family of tools required in the manufacturing process and recall readily the correct tool for usage.

## 5. Categorization, Identification, and Control of Tooling

5.1 The following criteria constitute characteristics that distinguish and differentiate ordinary tooling from unique tooling:

Unique tooling is specialized in nature,
Unique tooling is used for the development, production, or services of particular supplies or parts, and
Unique tooling performs a particular functionality, and is uniquely designed for that part or product.

5.1.1 Other tooling categories (see definitions in 3.1.3) that may be administratively tracked and identified individually only as determined necessary by the organization for the operational control or maintenance tracking purposes, if under the enterprise capital threshold (Practice E2279) include:

Standard tools,
Hand tools,
Expendable/perishable tools,
Installation kit tools,
Machined tools, and
Manufacturing shop aids.

5.1.2 Identification and control should be to the level both prudent and necessary to the scope or business in conjunction with cost of control considerations and risk factors.

5.2 If items in the other tooling categories are determined to need to be administratively controlled, they can be assigned a unique identification number (for example, bar code, etc.). Key data elements are often the manufacturer's name, model, or part number, or combination thereof.

5.3 Identification of unique tooling will be all inclusive for items owned by the entity as well as items not owned by the entity.

5.3.1 Unique tooling, regardless of ownership, may include, but are not necessarily limited to (also see Appendix X1):

Assembly jigs,
Fixtures,
Patterns,
Dies,
Molds,
Gauges,
Templates,
Custom robotic manufacturing systems, and
Laser based manufacturing systems deployed as manufacturing visual or measuring systems.

5.3.2 The data elements that create unique identification for unique tooling and are used in combination with each other to equal a unique individual tool (see Section 3 for definition) are:

Tool number,
Tool symbol (see 3.2.6), and
Tool series/multi. (see 3.2.5).

5.3.3 Other associated key information:

Tracking identification number (for example, barcode, etc.), and
Manufacturer's name.

5.4 Available tooling includes all on hand items, including those not currently in use to the extent that the tooling has been identified and is tracked or pooled.

## 6. Usage

6.1 The identification method outlined by this practice can be used to determine unique identification of tooling for use in tracking and controlling tooling.

6.2 An entity may identify unique tooling available to support the goals and mission of the entity and, over time, leverage this information to enhance performance.