

Issued 1982-05
Cancelled 2003-06

Superseded by J113539

Classification, Nomenclature, and Specification Definitions for Trenching Machines

Foreword—This SAE Standard is technically equivalent to SAE J1382 AUG85. There is no equivalent ISO document.

1. Scope—This SAE Standard applies to trenchers as categorized in SAE J1116. Only those terms not covered by SAE J1234 are described herein. The illustrations used are for clarification and are not intended to resemble a particular machine. Only basic working dimensions are given. They may be supplemented by the machine manufacturer. It is intended for this document to apply to any size trenching machine since many of the features of larger machines are found on smaller trenching machines as well.

1.1 Purpose—This SAE document defines classification, nomenclature, and dimensional specifications for trenching machines.

2. References

2.1 Applicable Publications—The following publications form a part of this specification to the extent specified herein. The latest issue of SAE publications shall apply.

2.1.1 SAE PUBLICATIONS—Available from SAE, 400 Commonwealth Drive, Warrendale, PA 15096-0001.

SAE J729 SEP86—Nomenclature and Specifications Definitions—Dozer
SAE J1116 JUN86—Categories of Off-Road Self-Propelled Work Machines
SAE J1233 JAN85—Commercial Literature Specifications—Off-Road Work Machines
SAE J1234 JAN85—Specification Definitions—Off-Road Work Machines
SAE TSB-003—Rules for SAE Use of SI (Metric) Units

3. Definitions

NOTE—Not all of the numerous types of trenching machines are defined herein.

3.1 Trenching Machine—An off-road machine used primarily to produce trench in a continuous operation by means of a digging chain, wheel, disk, plow blade, or other functionally similar device. Trenching machines are primarily used to install some type of underground service, drain tiles, etc.—not as subsoilers or rippers.

3.2 Trench—A narrow horizontal excavation. In general, the depth is greater than the width.

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SAE WEB ADDRESS:

- 3.3 Chain Line Trencher**—Trenching machine using one or more flexible digging chains having tools (teeth, bits, buckets, etc.) attached for cutting and conveying spoil from the trench (see Figures 1, 2, and 3).
- 3.4 Disk Trencher**—Trenching machine using a rotating disk edged with cutting tools; larger diameter disks greater than 900 mm are generally used for cutting rock, hardpan, or road surfaces such as asphalt and concrete. Smaller diameter disks less than 750 mm are generally used for trenching shallow depths less than 300 mm in soft conditions. Concrete saws of cutting width less than 25 mm are excluded from this definition.
- 3.5 Wheel Trencher**—Trenching machine using a rotating wheel typically employing a series of buckets with toothed cutting edges for cutting and conveying spoil from the trench. (Wheel trencher specification definitions and nomenclature to be developed at later date.)
- 3.6 Direct Burial Plow**—Trenching machine using drawbar pull to move a ripper-like plow blade through the soil while simultaneously burying underground services (see Figures 4, 5, and 6).
- 3.6.1 **STATIC PLOW**—A direct burial plow using only drawbar pull to move plow blade through soil.
- 3.6.2 **VIBRATORY PLOW**—A direct burial plow using blade oscillation to reduce the drawbar pull required to move plow blade through soil.
- 3.7 Spoil**—Earth, rock, and the like removed when making excavations.
- 4. Machine Classifications**—Trenching machines are type classified dependent upon the method used to couple the trenching elements to the base machine and upon the end point usage design objectives intended by their manufacturer(s).
- 4.1 Nonintegral Types**
- 4.1.1 **ATTACHMENT TYPE**—Trenching elements designed to be added to a multipurpose base machine (generally from another manufacturer) not uniquely designed for adaptation as a trenching machine.
- 4.1.2 **REMOVABLE TYPE**—Trenching elements for installation on a base machine designed to accept these elements as well as alternate elements, all generally from same manufacturer.
- 4.2 Integral Type**—Trenching elements designed as a part of the base machine frame, where trenching is a primary base machine function. Even though portions of the trenching elements may be removable, the base machine is not designed to have these elements replaced by other tools or elements.
- 5. Chain Line Trencher**
- 5.1 Nomenclature**—(Refer to Figures 1 to 3)
- NOTE—Some items shown may not be standard equipment.
- 5.2 Dimensional Terms**—Refer to SAE J1234 for general measurement conditions and description of basic dimensions (such as turning radius) not shown in Figures 1 to 3. Preferred units of measure are given in SAE J1233 and SAE TSB-003. Specify presence and size of optional equipment that may affect dimensional values, e.g., tire size, digging boom length, and digging chain size.

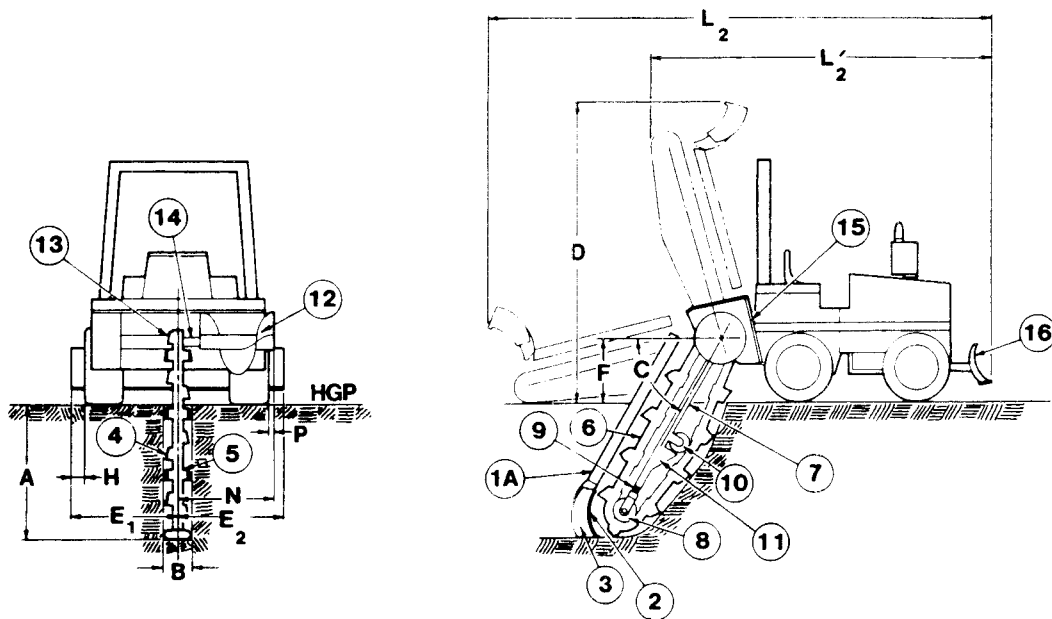


FIGURE 1—TRENCHER NOMENCLATURE

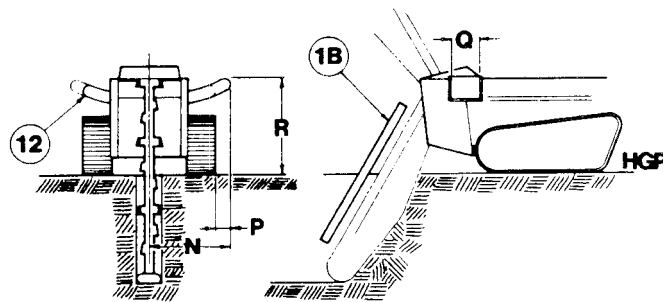


FIGURE 2—TRENCHER NOMENCLATURE