

[INCH-POUND]

A-A-59217

May 18, 1998

SUPERSEDING

OO-D-2765

May 7, 1991

COMMERCIAL ITEM DESCRIPTION

DITCHING MACHINES; LADDER-TYPE, LIGHT DUTY, 4-WHEEL-DRIVE, PNEUMATIC-TIRED, DED

The General Services Administration has authorized the use of this commercial item description by all Federal agencies.

1. **SCOPE.** This commercial item description (CID) covers self-propelled, 4-wheel-drive pneumatic-tired, diesel-engine-driven (DED), ladder-type ditching machines.

2. **CLASSIFICATION.** The ditching machines shall be of the following sizes, as specified (see 7.3):

Size A - Minimum 2,100 pounds (lb) (953 kilogram (kg)) basic unit weight; not less than 18 horsepower (hp) (134 watt (W)).

Size B - Minimum 3,000 lb (1 361 kg) basic unit weight; not less than 30 hp (224 W).

3. **SALIENT CHARACTERISTICS.**

3.1 **Description.** The ditching machines shall consist essentially of a pneumatic-tired, diesel-engine-driven, 4-wheel-drive carrier. The backfill blade shall be hydraulically-operated. The ladder-type digging attachment shall be hydraulically-lifted and driven. The ditching machine components shall include a brake system, a steering system, a discharge spoil conveyor or auger, a crumbler, an operator seat, and all necessary controls. The tractor drive and trencher drive shall have an operator presence system.

Beneficial comments, recommendations, additions, deletions, clarifications, etc. and any data which may improve this document should be sent to: Commanding Officer (Code 15E2), Naval Construction Battalion Center, 1000 23rd Avenue, Port Hueneme, CA 93043-4301.

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3.2 Standard commercial product. The ditching machines shall, as a minimum, be in accordance with the requirements of this commercial item description and shall be the manufacturer's standard commercial product. Additional or better features which are not specifically prohibited by this commercial item description but which are a part of the manufacturer's standard commercial product, shall be included in the ditching machines being furnished. A standard commercial product is a product which has been sold or is being currently offered for sale on the commercial market through advertisements or manufacturer's catalogs, or brochures, and represents the latest production model.

3.3 Performance. The ditching machines depth and width digging capabilities shall be as shown in table I. The crowding speed shall be selective automatically or by the operator. The full crowding effort of the ditching machines shall be applied over the entire digging depth range. When digging in muddy soil, clay, clay-loam, clay-gravel, and sand or combination, the crowding speed for size A shall be not less than 12 feet per minute (ft/min) (3.7 metre per minute (m/min)) at governed engine speed. The crowding speed for size B shall be not less than 15 ft/min (4.6 m/min) at governed engine speed. Wall and bottom of the cut shall be finished to line and grade without spoil. The discharge conveyor or auger shall be capable of depositing spoil at a distance sufficient to prevent re-entry of the spoil into the cut. Size A ditching machine shall be capable of traveling not less than 3 miles per hour (mph) (4.8 kilometre per hour (km/h)) at governed engine speed. Size B ditching machine shall be capable of traveling not less than 3.5 mph (5.6 km/h) at governed engine speed. The ditching machine shall be capable of negotiating a 20 percent grade.

TABLE I. Digging capabilities.

Size	Trench width inches (mm)	Minimum trench depth feet (m)
A	4 (102)	3.5 (1.07)
	6 (152)	3.0 (0.91)
	8 (203)	2.5 (0.76)
	10 (254)	2.0 (0.61)
	12 (305)	1.0 (0.30)
B	6 (152)	3.5 (1.07)
	8 (203)	3.0 (0.91)
	12 (305)	1.0 (0.30)

3.3.1 Ground drive mechanism. The ground drive mechanism shall be hydrostatic with infinite speeds or mechanical type with not less than three forward and one reverse speed with automotive type clutch.

3.4 Operational requirements. The ditching machines shall be capable of operating satisfactorily in ambient temperature from 0 degrees Fahrenheit (°F) up to 125 °F (- 18 degrees Celsius (°C))

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up to 52 °C) at a sea level elevation (29.92 inches of mercury (hg) (101.32 kilopascal (kPa) barometric pressure). The ditching machines shall also be capable of operating satisfactorily from 0 °F to a temperature of 107 °F (- 17 °C to 42 °C) at 5,000 feet (1 524 m) elevation (24.89 inches hg (84.29 kPa) barometric pressure).

3.5 Digging attachments. The digging attachments shall consist essentially of a lift arm equipped with adjustable ladder digging line, driving mechanism, spoil conveyor or auger, and hoisting mechanism. The hydraulic hoisting mechanism, operating independently of other drives, shall enable the operator to regulate the digging depth accurately, and to raise the attachment into travel position.

3.6 Teeth. When specified (see 7.3), the ditching machine shall be supplied with two sets of teeth for each trench width. Teeth shall be of the type to allow tooth removal and replacement with the use of common tools.

3.7 Backfill blade. A backfill blade shall be hydraulically operated and can be angled right or left. The blade(s) shall be of abrasion-resistant material.

3.8 Backhoe attachment. When specified (see 7.3), the manufacturer's standard commercial hydraulically operated backhoe attachment with an 18-inch (457 mm) bucket and a digging depth of not less than 69-inch (1.75 m) capability shall be provided for the size B ditching machine.

3.9 Hydraulic system. All controls shall be permanently identified. Hydraulic lines, which are to be disconnected when changing digging attachment, shall be provided with self-sealing, quick-disconnect fittings.

3.10 Controls. All controls for the ditching machines shall be so located as to be easily accessible to the operator in his normal seated position. The operator's seat shall be located in a position to give the operator an unobstructed view of the guide line and the trenching and backfilling operations.

3.11 Carrier. The carrier shall be diesel-engine-driven, pneumatic-tired, 4-wheel-drive, with limited slip differential, articulated or rigid frame, with a selective or hydrostatic transmission.

3.12 Steering. Steering shall be accomplished by means of wheel or lever actuated hydraulic or hydraulic-assisted power steering.

3.13 Engine. The engine furnished for the ditching machines shall be of the liquid cooled, diesel powered type. The engine shall be furnished complete with accessories as follows:

- a. As a minimum, an instrument panel complete with a fuel gage, oil pressure gage, a cooling liquid-temperature indicator, and ammeter/charging indicator.
- b. A fuel tank with sufficient capacity for a minimum of 3 hours normal operation.

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- c. A 12-volt electric cranking system.
- d. An alternator with a rating of not less than 32 amperes.
- e. A cold start system shall be installed.
- f. An engine hour meter having a totalizing mechanism of not less than 9,999 hours.

3.13.1. Housing. An engine housing shall be provided with doors or covers to allow accessibility to any engine components requiring routine maintenance and repair. Latches shall be provided to hold all doors or covers in the closed position. Doors or covers, if hinged, shall be designed to permit being restrained in the open position. The housing shall be removable or otherwise designed to permit engine removal and replacement.

3.14 Toolbox. When specified (see 7.3), the ditching machine shall be provided with a lockable metallic toolbox securely fastened to the ditching machine in a protected and accessible location.

3.15 Lifting and tiedown attachments. The ditching machines shall be equipped with lifting and tiedown attachments. A nonferrous transportation plate shall be provided and mechanically attached to the ditching machines. Transportation plates shall be inscribed with a diagram showing the lifting attachments and lifting slings, the capacity of each attachment, and the required length and size of each sling cable. A silhouette of the item furnished showing the center of gravity shall be provided on the transportation plate. Tiedown attachments may be identified by stenciling or other suitable marking. Tiedown marking shall clearly indicate that the attachments are intended for the tiedown of the ditching machines on the carrier when shipped.

3.16 Cleaning, treatment, and painting. Surfaces normally painted in good commercial practice shall be cleaned, treated, and painted as specified herein. The color of the finish coat shall be as specified (see 7.3). Surfaces to be painted shall be cleaned and dried to ensure that they are free from contaminants such as oil, grease, welding slag and spatter, loose mill scale, water, dirt, corrosion product, or any other contaminating substances. As soon as practicable after cleaning and before any corrosion product or other contamination can result, the surfaces shall be prepared or treated to ensure the adhesion of the coating system. The painting shall consist of at least one coat of primer and one finish coat. The primer shall be applied to a clean, dry surface as soon as practicable after cleaning and treating. Painting shall be with manufacturer's current materials according the manufacturer's current processes and the total dry film thickness shall be not less than 2.5 mils (0.0635 mm) over the entire surface. The paint shall be free from runs, sags, orange peel, or other defect.

3.17 Identification plate. An identification plate will be furnished by the contracting officer for each ditching machine. The contractor shall stamp all necessary data in the blank spaces of the plate provided for that purpose, and securely affix a plate to each ditching machine in a conspicuous place with nonferrous screws, rivets, or bolts. The applicable nomenclature contained in the contract item description shall be placed in the top blank.

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3.18 Instruction plates. The ditching machines shall be equipped with instruction plates or decals, suitably located, describing any special or important procedures to be followed in operating and servicing the equipment. Plates or decals shall be of a material which will last and remain legible for the life of the equipment. Plates shall be securely affixed to the equipment with nonferrous screws, rivets, or bolts of not less than 0.125-inch (3.175 mm) diameter.

3.19 Lubrication. Means for lubrication shall be in accordance with the manufacturer's standard practice. The lubricating points shall be easily visible and accessible. Hydraulic lubrication fittings shall be in accordance with SAE J 534. Where use of high-pressure lubricating equipment 1,000 pound-force per square inch (psi) (6 895 kPa) or higher, will damage grease seals or other parts, a suitable warning shall be affixed to the equipment in a conspicuous location.

3.20 Ladder. The ladder digging line shall be mounted on the lift arms, and shall be so constructed that each digging tooth can be removed individually. A safe accessible means shall be provided for the adjustment of the digging line.

3.21 Seat belts. The ditching machines shall be equipped with seat belts in accordance with SAE J 386.

3.22 Safety. Rotating or reciprocating parts and parts subject to high operational temperatures, that are of a nature or are located as to be or become a hazard to the safety of the operating personnel, shall be insulated, enclosed, or guarded. The ditching machine shall have Rollover Protection Structure (ROPS) to conform with the Society of Automotive Engineers SAE J 1040 and 29 CFR 1926.1000 and comply with applicable Occupational Safety and Health Administration (OSHA) regulations in effect at time of manufacture.

3.23 Noise. The exterior sound level of the engine and operator, station shall be measured in accordance with SAE J 88 and J 919. If the sound level in the area occupied by the operator, or surrounding area, is 85 db(A) or greater, a caution plate shall be permanently posted on the ditching machine in a conspicuous protected location and shall be clearly visible and legible to all personnel exposed to the excessive noise levels. The caution plate shall read: CAUTION - HEARING PROTECTION REQUIRED. The plate shall have a yellow background with black lettering and plate shall be made of corrosion-resistant material.

3.24 Interchangeability. All units of the same classification furnished with similar options under a specific contract shall be identical to the extent necessary to ensure interchangeability of component parts, assemblies, accessories, and spare parts.

3.25 Metric products. Products manufactured to metric dimensions will be considered on an equal basis with those manufactured using inch-pound units, provided they fall within specified tolerances using conversion tables contained in the latest version of ASTM SI-10, and all other requirements of this commercial item description including form, fit, and function are met. If a product is manufactured to metric dimensions and those dimensions exceed the tolerances specified in the inch-pound units, a request should be made to the specification preparing activity for changes to the document.

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4. REGULATORY REQUIREMENTS.

4.1 Recovered materials. The offeror/contractor is encouraged to use recovered materials to the maximum extent practicable, in accordance with paragraph 23.403 of the Federal Acquisition Regulation (FAR).

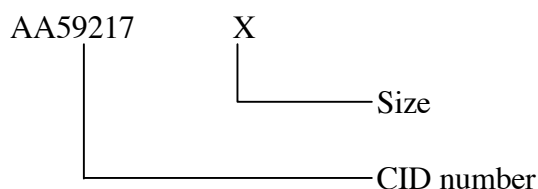
5. QUALITY ASSURANCE PROVISIONS.

5.1 Product conformance. The products provided shall meet the salient characteristics of this commercial item description, conform to the producer's own drawings, specifications, standards, and quality assurance practices, and be the same product offered for sale in the commercial market. The government reserves the right to require proof of such conformance.

6. PACKAGING. The preservation, packing, and marking shall be as specified in the contract or order.

7. NOTES.

7.1 Part Identification Number (PIN). The following part identification numbering procedure is for government purposes and does not constitute a requirement for the contractor. The PIN to be used for items acquired to this description are created as follows:



7.1.1 PIN code identifier.

- 1 = Size A
- 2 = Size B

7.2 Source of documents.

7.2.1 The Federal Acquisition Regulation (FAR), and OSHA standards may be obtained from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.

7.2.2 ASTM Standards are available from the American Society of Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959.

7.2.3 SAE Standards are available from the Society of Automotive Engineers, Inc., 400 Commonwealth Drive, Warrendale, PA 15096.

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7.3 Ordering data. Acquisition documents should specify the following:

- a. Title, number, and date of this CID.
- b. Size required (see 2.).
- c. When spare teeth are required (see 3.6).
- d. When backhoe attachment is required for size B ditching machine (see 3.8).
- e. When a toolbox is required (see 3.14).
- f. Color of finish coat (see 3.16).

7.4 Supersession data. This CID replaces Federal Specification OO-D-2765, dated May 7, 1991.

7.5 Classification cross reference. Classifications used in this CID (see 2.) are identical to those found in the superseded Federal Specification OO-D-2765.

MILITARY INTERESTS:

Custodians:

Army - AT
Navy - YD1
Air Force - 99

Review Activities:

Air Force - 84
DLA - CC

CIVIL AGENCY COORDINATING ACTIVITY:

GSA-FSS

Preparing Activity

Navy - YD1

(Project 3805-0019)