
 * NOT MEASUREMENT *
 * SENSITIVE *

 KKK-T-642B
 December 30, 1992
 SUPERSEDING
 KKK-T-642A
 December 31, 1974

FEDERAL SPECIFICATION

TRACTOR, WHEELED, GENERAL PURPOSE INDUSTRIAL
 (DIESEL-ENGINE-DRIVEN)

This specification is approved by the Commissioner, Federal Supply Service, General Services Administration, for the use of all Federal agencies.

1. SCOPE AND CLASSIFICATION

1.1 Scope. This specification covers general purpose commercial industrial wheeled tractors requiring one or more optional functions when specified herein such as: front end loading, backhoe, mowing and drawbar operations.

1.2 Classification.

1.2.1 Sizes. The tractors covered by this specification shall be of the following minimum sizes as specified (see 6.2).

Tractor size	Minimum SAE net horsepower
IW-20	20
IW-30	30
IW-40	40
IW-50	50
IW-60	60
IW-70	70
IW-80	80
IW-90	90
IW-100	100
IW-120	120
IW-140	140
IW-160	160

 Beneficial comments (recommendations, additions, deletions) and any pertinent
 *data which may be of use in improving this document should be addressed to: *
 *Commanding Officer (Code 156), Naval Construction Battalion Center, *
 *621 Pleasant Valley Road, Port Hueneme, CA 93043-4300, by using the *
 *Standardization Document Improvement Proposal (DD Form 1426) appearing at *
 *the end of this document or by letter. *

FSC 2420

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2. APPLICABLE DOCUMENTS

2.1 Government documents.

2.1.1 Specifications and standards. The following specifications, standards, and handbooks form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those listed in the issue of the Department of Defense Index of Specifications and Standards (DODISS) and supplement thereto, cited in the solicitation (see 6.2).

Federal Standard

FED-STD-123 - Marking for Shipment (Civil Agencies)

Commercial Item Description

A-A-393 - Extinguisher, Fire, Dry-Chemical (Hand-Portable)

(Activities outside the Federal Government may obtain copies of Federal specifications, standards, and commercial item descriptions as outlined under General Information in the Index of Federal Specifications, Standards and Commercial Item Descriptions. The Index, which includes cumulative bimonthly supplements as issued, is for sale on a subscription basis by the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.)

(Single copies of this specification and other Federal Specifications required by activities outside the Federal Government for bidding purposes are available without charge from Business Service Centers at the General Services Administration Regional Offices in Boston, MA; New York, NY; Philadelphia, PA; Washington, DC; Atlanta, GA; Chicago, IL; Kansas City, MO; Fort Worth, TX; Houston, TX; Denver, CO; San Francisco, CA; Los Angeles, CA; and Seattle, WA.)

(Federal Government activities may obtain copies of Federal standardization documents and the Index of Federal Specifications, Standards, and Commercial Item Descriptions from established distribution points in their agencies.)

Military Specification

MIL-T-3351 - Tractor, Full Tracked, Low Speed; Tractor Wheeled, Agricultural and Tractor Wheeled, Industrial; and Their Attachments, Packaging of

Military Standard

MIL-STD-129 - Marking For Shipment and Storage

(Copies of specifications, standards, handbooks, drawings, publications, and other Government documents required by contractors in connection with specific acquisition functions should be obtained from the contracting activity or as directed by the contracting activity.)

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2.1.2 Other Government documents, drawings, and publications. The following other Government documents, drawings, and publications form a part of this document to the extent specified herein. Unless otherwise specified, the issues are those cited in the solicitation.

Federal Regulations:

- 29 CFR 1926.600 - Equipment
- 29 CFR 1926.602 - Material Handling Equipment
- 29 CFR 1926.1000 - Rollover Protective Structures (ROPS)
for Material Handling Equipment
- 29 CFR 1926.1002 - Rollover Protection Structures (ROPS) Overhead
Protection
- 29 CFR 1926.1003 - Overhead Protection for Operators of
Agricultural and Industrial Tractors

(The Code of Federal Regulations (CFR) and the Federal Register (FR) are for sale on subscription basis by the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402. When indicated, reprints of certain regulations may be obtained from the Federal agency responsible for issuance thereof.)

Department of Agriculture:

- Forest Service Standard 5100-1 - Spark Arrester for Internal Combustion
Engines

(Application for copies should be addressed to the U.S. Department of Agriculture, Director of Procurement and Property, Forest Service, 706-RP-E, P.O. Box 96090, Washington, DC 20090-6090.)

2.2 Other publications. The following documents form a part of this document to the extent specified herein. Unless otherwise specified, the issues are those cited in the solicitation.

Society of Automotive Engineers (SAE):

- SAE J88 - Sound Measurement-Earthmoving Machinery-Exterior
- SAE J99 - Lighting and Marking of Industrial Equipment on Highways
- SAE J534 - Lubrication Fittings
- SAE J551 - Performance Levels and Methods of Measurement of
Electromagnetic Radiation from Vehicles and Devices
(30 to 1000 MHz)
- SAE J712 - Industrial and Agricultural Disc Wheels
- SAE J715 - Three-Point Free-Link Hitch Attachment of Implements to
Agricultural Wheeled Tractors
- SAE J919 - Sound Measurement-Earthmoving Machinery-Operator-Singular
Type
- SAE J943 - Slow-Moving Vehicle Identification Emblem
- SAE J994 - Alarm-Backup-Electric-Performance, Test, and Application
- SAE J1283 - Electrical Connector for Auxiliary Starting of Construction,
Agricultural, and Off-Road Machinery
- SAE J1349 - Engine Power Test Code - Spark Ignition and Diesel

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SAE J1362 - Symbols for Controls, Indicators, and Tell-Tales for
Off-Road, Self-Propelled Work Machines

(Application for copies should be addressed to the Society of Automotive Engineers, Inc., 400 Commonwealth Drive, Warrendale, PA 15096.)

Tire and Rim Association, Inc. (TRA):

TRA Yearbook

(Application for copies should be addressed to the Tire and Rim Association, Inc., 175 Montrose West Avenue, Suite 150, Copley, OH 44321.)

(Non-Government standards and other publications are normally available from the organizations that prepare or distribute the documents. These documents also may be available in or through libraries or other informational services.)

2.3 Order of precedence. In the event of a conflict between the text of this document and the references cited herein (except for associated detail specifications), the text of this specification takes precedence. Nothing in this specification, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

3. REQUIREMENTS

3.1 General. This specification covers standard commercial diesel-engine-driven general purpose industrial wheeled tractors.

3.2 Description. The tractors shall be diesel-engine-driven, pneumatic tired, and shall have two front steerable wheels and two rear drive wheels. The tractor, in addition to basic tractor function, shall be capable of performing such functions as: front-end loaders, backhoes, mowers, and or drawbar work when specified by the procuring activity.

3.3 First article. When specified in the contract or purchase order, a sample shall be subjected to first article inspection (see 4.4 and 6.2).

3.4 Materials. Materials used shall be free from defects which would adversely affect the performance or maintainability of individual components or of the overall assembly. Materials not specified herein shall be of the same quality used for the intended purpose in commercial practice. Unless otherwise specified herein, all equipment, material, and articles incorporated in the work covered by this specification are to be new and fabricated using materials produced from recovered materials to the maximum extent possible without jeopardizing the intended use. The term "recovered materials" means materials which have been collected or recovered from solid waste and reprocessed to become a source of raw materials, as opposed to virgin raw materials. Unless otherwise specified, none of the above shall be interpreted to mean that the use of used or rebuilt products is allowed under this specification.

3.5 Temperature conditions. The tractor shall perform satisfactorily in any ambient temperature from -10 degrees Fahrenheit (oF) up to and including 120oF.

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3.6 Safety. All exposed parts, which are subject to high operating temperature or which are energized electrically, shall be located, insulated, fully enclosed, or guarded so as to prevent hazards to operating personnel. All moving parts which are of such nature or so located as to be a hazard to operating personnel shall be enclosed or guarded. Protective devices shall not impair the operating functions. The tractor shall comply with 29 CFR 1926.602 (seat belts, brakes, and horns), 1926.1002 (overhead covering), and 1926.1000 (ROPS).

3.6.1 Sound level. The exterior sound level of the tractor shall not exceed 88 dB(A) when measured in accordance with SAE J88. If the sound level in the area occupied by the operator exceeds 85 dB(A) when measured in accordance with SAE J919, a clearly visible and legible warning plate containing the following shall be permanently affixed to the tractor in a conspicuous protected location: "CAUTION: HEARING PROTECTION REQUIRED WHEN TRACTOR IS OPERATING." The plate shall have a yellow background with black lettering and shall be of corrosion-resistant material.

3.7 Performance.

3.7.1 Engine horsepower. For specified tractor size (see 6.2), the tractor shall meet the minimum SAE horsepower requirements established in 1.2.1.

3.7.2 Gradeability. The tractor without attachments shall negotiate 30 percent side slopes and 30 percent longitudinal slopes or any combination thereof without any wheel of the tractor losing contact with the ground; and the engine and other pressure lubricating components shall maintain constant operating oil pressure and operate without malfunction under these slope conditions.

3.7.3 Front end loader. When specified (see 6.2), the manufacturer shall install all necessary components on the tractor to provide front end loading capabilities.

3.7.4 Backhoe. When specified (see 6.2), the manufacturer shall install all necessary components on the tractor to provide backhoe capabilities.

3.7.5 Functional performance. The tractor with specified optional equipment shall be capable of performing any of the functions as specified in 3.2.

3.8 Ease of maintenance. All major assemblies and installed optional attachments shall be accessible for maintenance, repair and replacement. Covers or plates which must be removed for component adjustment, repair, replacement, or maintenance shall be equipped with quick-disconnect fasteners where practicable. Drain outlets shall be located for accessibility and shall permit the use of receptacles for collecting drainage.

3.9 Frame. The frame or chassis shall be adequate to withstand the maximum stresses encountered in normal operating conditions. It shall be capable of providing adequate support and strength to operate optional attachments designed as mounted equipment and approved by the tractor manufacturer for use in combination with the tractor.

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3.10 Engine. Unless otherwise specified (see 6.2), manufacturer's diesel engine, with standard components as supplied commercially for the size tractor supplied, shall be provided. An exhaust stack with rain cap or curved outlet opening shall be furnished; nonturbocharged engines shall be equipped with an exhaust muffler. Exhaust stack shall be located so as to vent gases away from the operator's compartment.

3.11 Engine lubrication system. The engine lubrication system shall provide adequate lubrication under all normal operating conditions.

3.12 Engine governor. Engine manufacturer's standard governor shall be provided. A hand governor control for regulating the governed speed setting throughout the entire engine load range shall be provided and mounted so that it will be convenient to the operator.

3.13 Engine cooling system. Unless otherwise specified (see 6.2), manufacturer's standard engine cooling system shall be furnished.

3.14 Engine starting system. The manufacturer's standard starting system shall be furnished.

3.15 Fuel tank. Manufacturer's standard fuel tank, with a capacity for 8 hours of continuous normal operation, shall be provided. The tank shall be equipped with a means for draining water and sediment from the bottom of the tank.

3.16 Exhaust spark arrestor. When specified (see 6.2), the exhaust spark arrestor shall meet the requirements of Forest Service Standard 5100-1 for the control of the emission of glowing sparks from the exhaust system.

3.17 Clutch. When specified (see 6.2), the procuring activity shall specify one of the following type of components for their tractor: clutch, torque converter, or hydrostatic drive.

3.18 Transmission. The transmission shall be of either the selective sliding gear, synchro-mesh, constant-mesh, planetary or hydraulic types. The input torque capacity of the transmission shall be greater than the maximum gross torque developed by the engine. Operation of the gear-type transmission augmented by planetary gear or mechanical sliding-gear units is acceptable. Hydraulic powershift, torque converter, shuttle-type, or planetary-type drive and hydrostatic drive may be specified where required (see 6.2).

3.18.1 Number of transmission speeds. Unless otherwise specified (see 6.2), the manufacturer's standard transmission speeds shall be furnished.

3.19 Steering. Unless otherwise specified (see 6.2), manufacturer's standard production steering shall be provided. On power-assist or full power steering, the features of directional stability inherent in the manually operated steering mechanism shall be preserved.

3.20 Wheels and rims. Steel disc wheels shall conform to SAE J712. In lieu thereof, cast or welded steel wheels are permissible. Rims shall be in accordance with the TRA Yearbook for the tire size required.

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3.21 Tires. Tires shall be of a rating in accordance with the TRA Yearbook to sustain any load imposed by the mounted attachments specified. Tread design shall be as specified (see 6.2). Tire pressure shall be in accordance with the TRA Yearbook, and shall be stenciled above or near the tire location and be labeled in 1-inch high letters: TP (specify).

3.22 Brakes. The tractor shall be provided with manufacturer's standard brakes, and shall be designed to operate either the right or left brake independently or simultaneously at the discretion of the operator. The brakes shall permit adequate control of the tractor under all normal operating conditions and be acceptable for deceleration as well as steering purposes. In event of power assist failure, the brakes shall be operable with a force not to exceed 70 pounds (lb). A mechanical parking brake shall be provided. Mechanical service brakes which can be locked as parking brakes or transmission parking locks are acceptable.

3.23 Instruments. The following instruments shall be provided, so mounted as to be convenient and visible from the operator's seat: oil-pressure indicator, water temperature indicator, ammeter indicator or voltmeter, fuel gauge, light switch, starter control, and ignition switch. Either gauges or light indicators are acceptable. Key operated ignition switch shall be furnished. Operator's controls and displays shall be in accordance with SAE J1362.

3.24 Tachometer and engine hour meter. Unless otherwise specified (see 6.2), the tractor shall be provided with a tachometer or hour meter or combination thereof which shall register not less than 9,999 hours of operation.

3.25 Electrical system. Manufacturer's standard electrical system shall be provided.

3.25.1 Battery. Manufacturer's standard battery(s) shall be provided. Mounting of battery(s) shall permit ready accessibility for servicing, removing, and replacement. Battery(s) shall be securely held in place on carrier trays by means of removable locking devices and shall be protected against engine and exhaust heat. The battery terminals shall be provided with guards to prevent accidental shorting.

3.25.2 Lights and markings. Lights and markings of the tractor shall conform to SAE J99. When practical, lights shall be guarded or mounted in a protected location.

3.25.3 Alternator. The alternator shall be the manufacturer's standard and shall provide adequate service under all operating conditions specified herein.

3.25.4 Auxiliary starting. When specified (see 6.2), a waterproof, dual socket receptacle conforming to SAE J1283 shall be provided to facilitate electrical connection between battery(s) and external power source for emergency charging or starting, and shall be labeled, "Auxiliary Power."

3.26 Hydraulic system. When specified (see 6.2), the hydraulic system shall be the manufacturer's standard for the tractor supplied and shall be compatible with the optional accessories. All components shall be located in a protected position to prevent damage from objects encountered in normal operation. All

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optional components and materials shall be compatible with the hydraulic system.

The complete system shall operate from a temperature range of -25oF to +120oF. The reservoir shall be either pressurized or nonpressurized. If a nonpressurized reservoir is furnished, a breather filter shall be furnished. Means of checking the oil level in the reservoir shall be provided.

3.27 Power take-off. When specified (see 6.2), the procuring activity shall specify which rear power take-off tractor is required from the following:

- a. Transmission-driven power take-off. Specify 540 rpm, 1,000 rpm, or combination of 540 and 1,000 rpm.
- b. Continuous running power take-off. Specify 540 rpm, 1,000 rpm, or combination of 540 and 1,000 rpm.
- c. Independent power take-off. Specify 540 rpm, 1,000 rpm, or a combination of 540 and 1,000 rpm.

3.28 Rear fenders. The tractor shall be equipped with the manufacturer's standard production rear fenders or guards.

3.29 Operator's seat. Unless otherwise specified (see 6.2), the tractor shall be equipped with the manufacturer's standard production seat.

3.30 Hitch. When specified (see 6.2), the procuring activity shall specify if any hitch is required:

- a. No hitch required.
- b. Swinging drawbar type.
- c. Fixed drawbar type.
- d. Three point lift type hitch shall conform to the requirements of SAE J715. Stabilizer is required.

3.31 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 J534. Where use of high-pressure lubricating equipment, 1,000 pound-force per square inch or higher, will damage grease seals or other parts, a suitable warning shall be affixed to the equipment in a conspicuous location.

3.32 Tools. Tools normally furnished with the tractor by the manufacturer shall be provided together with the manufacturer's regular tool storage space.

3.33 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 6.2). Surfaces to be painted shall be cleaned and dried to insure 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

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with manufacturer's current materials according to manufacturer's current processes and over the entire surface. The paint shall be free from runs, sags, orange peel, or other defects.

3.34 Identification marking. Identification shall be permanently and legibly marked directly on the tractor or on a corrosion-resisting metal plate securely attached to the tractor at the source of manufacture. Identification shall include the manufacturer's model and serial number, name and trademark to be readily identifiable to the manufacturer.

3.35 Optional accessories. When specified (see 6.2), the procuring activity shall specify if any of the following accessories or options are required:

- a. If slow moving emblem is required, it shall conform to SAE J943.
- b. If differential lock is required.
- c. If fire extinguisher is required, it shall conform to A-A-393, size 1-1/2 lb, mounted in a position readily accessible to the operator.
- d. If vandalism protection kit (as offered commercially by the manufacturer) is required.
- e. If rear view mirror for ROPS canopy or ROPS cabs is required.
- f. If a fully enclosed type cab is required, the cab shall be provided with operator's seat and all operating controls. Power operated windshield wipers or split windshield, with two power operated front wipers shall be provided. All glass shall conform to 29 CFR 1926.600 and the cab shall conform to 29 CFR 1926.1000 for rollover protection.
- g. If required, the personnel heater, defroster, or defroster fan installed in fully enclosed cab.
- h. If manufacturer's current air conditioned cab is required, the cab shall meet the requirements for the fully enclosed cab specified in 3.35.1f.
- i. If required, the tractor's overhead covering shall conform to 29 CFR 1926.1003.
- j. If required, front bumper to cover the width of the frame or radiator.
- k. If overriding governor-type foot control is required.
- l. If power lift for pull-behind tools is required.
- m. If additional weights are required, specify kind and minimum weight.
 - (1) front wheel (pair)
 - (2) rear wheel (pair)
 - (3) frame weights (front)
 - (4) frame weights (rear)
- n. If back-up alarm is required it shall meet the performance of SAE J994.

3.36 Special requirements.

3.36.1 Winterization. When specified (6.2), the tractor shall be winterized as per manufacturer's standard procedure.

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3.36.2 Radio interference suppression. When specified (see 6.2), the tractor shall be suppressed to limit electromagnetic radiation in accordance with SAE J551.

3.37 Workmanship.

3.37.1 Steel fabrication. The steel used in fabrication shall be free from kinks, sharp bends, and other conditions which would be deleterious to the finished product. Manufacturing processes shall not reduce the strength of the steel to a value less than intended by the design. Manufacturing processes shall be done neatly and accurately. All bends shall be made by controlled means to ensure uniformity of size and shape.

3.37.2 Bolted connections. Bolt holes shall be accurately punched or drilled and shall have the burrs removed. Washers or lockwashers shall be provided in accordance with good commercial practice, and all bolts, nuts, and screws shall be tight.

3.37.3 Riveted connections. Rivet holes shall be accurately punched or drilled and shall have the burrs removed. Rivets shall be driven with pressure tools and shall completely fill the holes. Rivet heads, when not countersunk or flattened, shall be of approved shape and uniform size for the same diameter of rivet. Rivet heads shall be full, neatly made, concentric with the rivet holes, and in full contact with the surface of the member.

3.37.4 Welding. Welding procedures shall be in accordance with a nationally recognized welding code. The surface of parts to be welded shall be free from rust, scale, paint, grease, or other foreign matter. Welds shall be of sufficient size and shape to develop the full strength of the parts connected by the welds. Welds shall transmit stress without permanent deformation or failure when the parts connected by the weld are subjected to proof and service loadings.

3.37.5 Castings. All castings shall be sound and free from patching, misplaced coring, warping, or any other defect which reduces the casting's ability to perform its intended function.

4. QUALITY ASSURANCE PROVISIONS

4.1 Responsibility for inspection. Unless otherwise specified in the contract or purchase order, the contractor is responsible for the performance of all inspection requirements (examinations and tests) as specified herein. Except as otherwise specified in the contract or purchase order, the contractor may use his own or any other facilities suitable for the performance of the inspection requirements specified herein, unless disapproved by the Government. The Government reserves the right to perform any of the inspections set forth in this document where such inspections are deemed necessary to ensure supplies and services conform to prescribed requirements.

4.1.1 Component and material inspection. Components and materials shall be inspected in accordance with all the requirements specified herein and in applicable referenced documents.

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4.2 Classification of inspections. The inspection requirements specified herein are classified as follows:

- a. First article inspection (see 4.2.1).
- b. Quality conformance inspection (see 4.2.2).

4.2.1 First article inspection. The first article inspection shall be performed on one tractor when a first article is required (see 3.3 and 6.2). This inspection shall include the examination of 4.3 and the tests of 4.4. The first article may be either a first production item or a standard production item from the supplier's current inventory provided the item meets the requirements of the specification and is representative of the design, construction, and manufacturing technique applicable to the remaining items to be furnished under the contract.

4.2.2 Quality conformance inspection. The quality conformance inspection shall include the examination of 4.3, the tests of 4.4, and the packaging inspection of 4.6.

4.3 Examination. Each tractor shall be examined for compliance with the requirements specified in section 3 of this document. Any redesign or modification of the contractor's standard product to comply with specified requirements, or any necessary redesign or modification following failure to meet specified requirements shall receive particular attention for adequacy and suitability. This element of inspection shall encompass all visual examinations and dimensional measurements. Noncompliance with any specified requirement or presence of one or more defects preventing or lessening maximum efficiency shall constitute cause for rejection.

4.4 First article test. When first article is required, the first article shall be tested as specified in 4.4.1 through 4.4.6. The first article tests shall be performed by the contractor under the direction and in the presence of a Government representative. Failure to pass any phase of the required test shall be cause for the Government to refuse acceptance of the tractor until corrective action has been made.

4.4.1 Gradeability. Place the tractor on level soil. With an approach distance of at least 5 feet (ft), and not more than 15 ft, run the tractor, (without attachments), towards a slope of at least 30° consisting of dry compacted soil. The tractor must climb to a height of at least 15 ft from the base of the slope without losing traction or exceeding recommended oil pressure.

The tractor shall then be placed on the slope and run at least 30 ft along the side of the slope. The tractor must remain in full contact with the soil. Nonconformance to 3.7.2 shall constitute failure of this test.

4.4.2 Sound level. The sound level of the tractor while operating shall be measured in accordance with SAE J88 and J919. An exterior reading exceeding 88 dB(A) or an operator's area grading exceeding 85dB(A) shall constitute grounds for failure. Nonconformance to 3.6.1 shall constitute failure of this test.

4.4.3 Front end loading. Perform 8 hours of loading by loading, transporting, and unloading soil, gravel, or stone. The transported distance shall be a minimum of 25 ft from the point of loading. Nonconformance to 3.7.3 shall constitute failure of this test.

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4.4.4 Backhoe. Perform 8 hours of backhoe operation by digging at least 5 rectangular ditches in virgin or recompacted soil. Each ditch shall be at least 20 ft long, 2 ft wide, and 2 ft deep. Nonconformance to 3.7.4 shall constitute failure of this test.

4.4.5 Engine horsepower. The net engine horsepower (see 6.2) shall be determined by SAE J1349. Nonconformance to 3.7.1 shall constitute failure of this test.

4.4.6 Functional. The tractor, without specified optional accessories, shall be operated for a minimum of 2 hours. This operation shall consist of engine, road, brake, steering, and electrical functions. Nonconformance to 3.7.5 shall constitute failure of this test.

4.5 Packaging inspection. The preservation, packing, and marking of the item shall be inspected to verify conformance to the requirements of section 5.

5. PREPARATION FOR DELIVERY

5.1 Preservation, packaging, and packing. Preservation, packaging, and packing shall be in accordance with the requirements of MIL-T-3351, with the level of preservation, packaging and the level of packing as specified (see 6.2).

5.2 Marking.

5.2.1 Military agencies. Shipments to military agencies shall be marked in accordance with MIL-STD-129.

5.2.2 Civil agencies. Shipments to civil agencies shall be marked in accordance with FED-STD-123.

6. NOTES

(This section contains information of a general or explanatory nature that may be helpful, but is not mandatory.)

6.1 Intended use. The tractor is intended for loading, backhoe digging, trenching, blading, mowing, and drawbar pulling (other than agricultural, wheeled, covered in KKK-T-640).

6.2 Acquisition requirements. Acquisition documents should specify the following:

- a. Title, number, and date of this specification
- b. Size of tractor required (see 1.2.1)
- c. Minimum SAE horsepower requirements depending on tractor size (see 1.2.1, 3.7.1 and 4.4.5)
- d. Issue of DODISS to be cited in the solicitation, and if required, the specific issue of individual documents referenced (see 2.1.1)
- e. When first article is required for inspection and approval (see 3.3)
- f. When front loader is required (see 3.7.3)
- g. When back hoe is required (see 3.7.4)
- h. When gasoline engine is required (see 3.10)

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- i. When heavy duty cooling system is required (see 3.13)
- j. When spark arrestor is required (see 3.16)
- k. Specify clutch, power shift, hydrostatic drive or torque converter, (see 3.17)
- l. When hydraulic powershift, hydrostatic drive torque converter or shuttle type, or planetary type drive are required (see 3.18)
- m. When the number of transmission speeds is different from the manufacturer's standard (see 3.18.1)
- n. When other than manufacturer's standard steering is specified (see 3.19)
- o. Type of tread design (see 3.21)
- p. When other than tachometer and engine hour meter are specified (see 3.24)
- q. When electrical receptacle is required (see 3.25.4)
- r. When hydraulic system is required (see 3.26)
- s. Type of PTO required (see 3.27)
- t. When other than manufacturer's standard operator's seat is specified (see 3.29)
- u. Hitch requirements (see 3.30)
- v. Finish coat color (see 3.33)
- w. Accessories or options required (see 3.35)
- x. When winterization is required (see 3.36.1)
- y. When radio interference suppression is required (see 3.36.2)
- z. Level of preservation, packaging, and packing required (see 5.1)

6.3 First article inspection. The first article inspection shall be performed on one unit when a first article is required. The first article may be either a first production item or a standard production item from the supplier's current inventory provided the item meets the requirements of the specification and is representative of the design, construction, and manufacturing technique applicable to the remaining items to be furnished under the contract.

6.4 Subject term (key word) listing.

Digging
Dirt
Mowing
Removal

6.5 Changes from previous issue. Marginal notations are not used in this revision to identify changes with respect to the previous issue due to the extensiveness of the changes.

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MILITARY INTERESTS:

Custodians

Army - ME
Navy - YD
Air Force - 99

Review Activity

Army - AT

User Activity

Navy - MC

CIVIL AGENCY COORDINATING ACTIVITIES:

COM - NMF
USDA - AFS, APS
DOT - NHT
GSA - FSS

PREPARING ACTIVITY:

Navy - YD
(Project 2420-0027)

Orders for this publication are to be placed with General Services Administration, acting as an agent for the Superintendent of Documents. See section 2 of this specification to obtain extra copies and other documents referenced herein.