INCH-POUND

MIL-T-87998 (84) 22 February 1990

#### MILITARY SPECIFICATION

TRUCK LIFT, FORK, ELECTRIC, NARROW AISLE REACH, STAND-UP OPERATOR 3,000 POUND CAPACITY, 205 INCH MINIMUM LIFT

This Specification is approved for use within (Code 84) Department of the Air Force and is available for use by all Departments and Agencies of the Department of Defense.

1.0 SCOPE

1.1 <u>Scope.</u> This Specification covers the requirements for a Truck Lift Fork, battery powered, narrow aisle reach, industrial type truck.

2.0 APPLICABLE DOCUMENTS

## 2.1 <u>Government documents</u>.

2\*1.1 Specifications, and standards. The following specifications, and standards form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those listed in the Department of Defense Index of Specifications and Standards (DODISS) and supplement thereto, cited in the solicitation (see 6.2).

SPECIFICATIONS

MILITARY

MIL-P-514 Plates, Identifications, and Marking, Blank

STANDARDS

FEDERAL FED-STD-595 Colors

MILITARY

MIL-STD-889 Dissimilar Metals MIL-STD-248 Welding and Brazing Procedure

Unless otherwise indicated, copies of the federal and military specifications, standards, and handbooks are available from the Naval Publications and Forms Center, (ATTN: NPODS), 5801 Tabor Avenue, 'Philadelphia, PA 19120-5099.

Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: WR-ALC/MVRG, Robins AFB, GA 31098-5609 by using the Standardization 'Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

AMSC N/A

FSC 3930

<u>Distribution Statement A.</u> Approved for public release; distribution is unlimited.

2.2 <u>Non-Government publications.</u> The following document(s) form a part of this document to the extent specified herein. Unless otherwise specified, the issues of the documents which are DOD cited in the solicitation. Unless otherwise specified, the issues of documents not listed in the DODISS are the issues of the documents cited in the solicitation (see 6.2).

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

B56.1 - Safety Standards for Powered Industrial Trucks. B56.11.3-Load Handling Symbols Powered Industrial Trucks.

(Application for copies should be addressed to the American National Standards Institute, Inc., 1430 Broadway, New York, NY 10018.

NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA)

NEMA Standards

(Application for copies should be addressed to the National Electric Standards Institute, Inc., 1430 Broadway, New York, NY 10017.)

SOCIETY OF AMERICAN ENGINEERS INC. (SAE)

- J534 Lubrication Fittings.
- J754 Lubricant Types-Construction and Industrial Machinery.
- J1176 Sound Measurement-Earth Moving Machinery

(Application for copies should be addressed to the Society of Automotive Engineering, Inc., 400 Commonwealth Drive, Warrendale, PA 15095.)

2.3 <u>Order of precedence</u>. In the event of a conflict between the text of this document and the references cited herein, the text of this document takes precedence. Nothing in this document however supersedes applicable laws and regulations unless a specific exemption has been obtained.

#### 3. REQUIREMENTS

Description, The truck shall be a commercial, electric 3.1 powered, stand-up operator, reach truck, in accordance with ANSI B56.1. It shall be equipped with a battery, an electric drive motor , a solid state control , and a roller mast as specified herein. The forklift shall be equipped with standard instruments , components , and accessories , normally required for the safe and effective operation of the truck. The truck shall be complete with all components that are standard with the contractor's products, whether stipulated herein or not, together with such accessories, and options, as may be specified herein. The truck shall be equipped with all other components and parts not specifically mentioned but necessary to provide a functional machine and shall conform in quality to that normally provided to the commercial industry.

3.1.1 <u>First article</u>, When specified in the contract or purchase order, a sample shall be subjected to first article inspection (see 4.3, and 6.3). The approved first article truck shall be presented for acceptance as the last unit for delivery under the contract after being rehabilitated to a new condition.

3.1.2 <u>DESIGN</u>

3.1.2.1 <u>Design</u>. The truck shall be designed for 3,000 pounds minimum capacity at 24 inch load center, up to the maximum lift height of the truck. The load center is measured from the forward vertical load carrying surface of the forks.

3.1.2.2 <u>Safety</u>. The truck shall conform to the applicable requirements of ANSI B56.1.

3.1.2.3 <u>Environmental requirements</u>. The truck shall operate in any ambient temperature from  $0^{\circ}F$  to  $+110^{\circ}F$ .

3.1.2.4 <u>Lubrication</u>. Lubrication means shall be provided for all moving parts that require periodic lubrication. The types of lubrication shall be selected from and in accordance with SAE J754. Grease lubrications fittings shall conform to SAE J534.

3.1.2.5 <u>Maintainability</u>. All maintenance and servicing functions shall be capable of being performed using common hand tools. Provision shall be. made for adjustment, servicing and replacement of all electrical assemblies and components, hydraulic system components or assembly where applicable, battery, wearing parts of lift and tilt mechanism, brakes and components , wearing parts of steering assembly, tires, wheels and horns without removal of any major parts other than covers. There shall be no interference with the servicing or draining of oils and lubricants to or from any assembly or components by frame members or other obstructions. Drain holes with removable drain plugs shall provide for complete drainage without disconnection of lines. All drain plugs shall be the magnetic type .

3.1.2.6 F<u>luid level indicator</u>. All fluid level indicators shall be located where they are readily accessible without danger of burns or injury to the operator. If a panel must be opened to reach a level indicator, it shall open without the need of tools and shall be hinged to stay on the truck when open.

3.1.2.7 <u>Dissimilar metals</u>. Unless protected against electrolytic corrosion, dissimilar metals shall not be used in intimate contact. Dissimilar metals are defined in MIL-STD-889.

3.1.3 <u>Electric motors</u>. Motors shall be industrial type with a high starting torque. The insulation for motors shall be class B, F or H as defined in NEHA standards.

3.1.4 <u>Battery</u>. The battery shall be 24 volts, with at least 660 ampere hour rating. In addition, the battery shall be of sufficient capacity for continuous operation of the truck for at least eight hours without recharging.

3.1.5 Hydraulic system. The hydraulic system shall consist of all hydraulic components necessary for operation of the forks and mast and does not include brake system components. Unless otherwise specified herein, all hydraulic system components shall withstand a proof pressure that is equal to or greater than 1-1/2 times the maximum working pressure (1-1/2 times relief valve setting) without external leakage, damage or permanent deformation. A pipe tap or straight o-ring boss test point shall be located at the outlet of each pump or pressure inlet of each control valve for measuring pressure. The system shall provide for lowering of rated load at not more than 80 feet per minute in the event of failure of or damage to hydraulic hose(s) supplying the lift cylinder.

3.1.5.1 <u>Hydraulic system filtration</u>. A screw-on, cartridge type system filter shall be furnished in the suction side of the system. The filter shall be accessible and removable without removal of any vehicle components,

3.1.6 Uprights and carriage assembly. Uprights shall be the telescopic roller type. Rollers shall be of the permanently lubricated for life type. Adequate means shall be provided in the uprights to compensate, by replacement or adjustment, for wear which may develop between lateral rolling contracts. Positive means shall be provided to prevent over-travel of the carriage or channel in both upper and lower positions.

3.1.6.1 Forks , The forks and fork carrier shall conform to ANSI B56.1. Forks shall be 2.0 inches maximum thickness, 5 inches maximum width and 42 ( $\pm 1/2$ ) inches in length. Fork thickness shall not exceed 1/2 inches at the tips and the taper shall not be less than 14 inches long. Taper shall be on the under side of the forks. The top of the fork tips shall be chamfered or rounded to provide smooth edges. Forks shall be laterally adjustable without the use of handtools. With the forks at their widest spacing they must be spread at least 28 inches, measured from the outside of the forks. With the forks at their narrowest spacing they must be spread no more than 19 inches, measured from the outside of the forks. The forks shall be capable of being secured when in position to prevent lateral movement. The operator shall be able to see the tip of at least one fork at any lift height and any fork spacing.

3.1.5.2 Load backrest. A metal backrest, or backrest with extension, shall be provided. There shall be no protruding bolts or appendages beyond the side plane of the load backrest-The load backrest, in conjunction with fork and hanger design, shall provide a vertical rear guard at least 48 inches high measured from the load carrying surfaces of the forks.

3.1.6.3 Fork extension. Forks and load backrest shall be able to extend (reach) forward at least 23 inches from the rearmost position. All fork movements shall be controlled from the operator's location.

3.1.7 <u>Tires</u>. The tires shall be new, standard commercial type with casters and load wheels as required.

3.1.8 <u>Steering</u>. Power steering shall be furnished.

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3.1.9 <u>Service brakes</u>. Hydraulically actuated foot brakes conforming to the requirements of ANSI B56.1 shall be provided.

3.1.10 <u>Parking brake</u>. The parking brakes shall be automatically applied when the operator leaves the truck.

3.1.11 <u>Operator's overhead guard</u>. An overhead guard in accordance with ANSI B56.1 shall be furnished. Overhead guard height shall not exceed 94 inches measured from ground level to top of guard with no load on the truck.

3.1.12 <u>Horn</u>. The truck shall be equipped with an electric horn with push button mounted in the center of the steering wheel of in an other location accessible to the seated operator. Horn button assembly and electrical wiring for the born shall be constructed to be moisture and weather resistant.

3.1.13 <u>Controls and instrumentation</u>. All controls and instrumentation shall be provided with position markings conforming to ANSI B56.11.3.

3.1.13.1 <u>Battery discharge indicator</u>. A battery discharge indicate? that has a fuel gauge that indicates the charge of the battery shall be furnished. When the battery reaches a predetermined low charge, the lift control circuit shall be interrupted , making the lift mechanism inoperative until the battery has been replaced or recharged.

3. 1.13.2 <u>Master switch</u>. A key operated master switch shall be provided. When key is removed, all electrical circuits shall be opened or interrupted making it impossible for any electrical system to be activated. Two keys shall be supplied with each truck. All keys shall be identical for every truck delivered on this contract.

3. 1.13.3 <u>Hour meter</u>. An electrically operated hour meter shall be provided. It shall operate when the forklift is travelling. both forward and reverse.

3.1.14 <u>Brake light</u>. There shall be one brake light on the rear of the forklift.

3.1.15 <u>Floodlights</u>. There shall be three floodlights, each with a rating of at least 25 watts. One shall be mounted on the left side of the mast, facing forward, a second mounted on the right side of the mast, facing forward and the third mounted, at or near the rear of the truck, facing rearward. Directional adjustment for these lights shall be at least 45° above and below the horizontal plane, and 90" to both sides of the fore and aft longitudinal center-line of the truck. One switch, mounted on the dash, within reach of the seated operator, shall control both floodlights.

3.1.16 <u>Battery cable connector</u>. The battery cable shall be equipped with a two contact, type SB locking half connector. The connector shall be used to connect the battery to the motor during recharging and to connect the battery to a battery charger during recharging. The connector shall be located where it cannot be accidently unfastened, or opened, by the operator during entry, exit or operation.

## 3.2 <u>Performance</u>

3.2.1 <u>Lifting speed</u>. Speed of lift with rated load on the forks shall be not less than 30 feet per minute over the entire distance from ground level to maximum fork height.

3.2.2 <u>Lowering speed</u>. Speed of lowering unloaded forks shall not be less than 40 feet per minute over the entire distance from maximum fork height to ground level. Speed of lowering forks with rated load shall not be more than 80 feet per minute over the entire distance from maximum fork height to ground level. The hydraulic control system shall be damped, metered, or easily manually regulated to reduce shock and prevent the truck from overturning when a rated load is lowered at maximum speed and stopped quickly.

3.2.3 <u>Service brake</u>. With rated load, the truck shall be capable of meeting the stopping distance requirements of ANSI B56.1.

3.2.4 <u>Parking brake</u>. The parking brake shall be capable of holding the truck with rated load on a 15 percent grade in both forward and reverse directions.

3.2.5 Right angle turn. The truck, carrying rated capacity load, shall be capable of backing through a turn (see 4.4.5) in either direction between two parallel walls not more than 130 inches apart.

3.2.6 <u>Speed</u>. While carrying the rated capacity load on a level surface , truck shall be capable of attaining speed of at least 4 miles per hour forward and reverse.

3.2.7 <u>Slope ascension, forward direction</u>. The truck shall be capable of driving on a horizontal surface, then ascending a 15 percent grade in the forward direction on a dry concrete surface, with and without rated load. The truck shall be able to accelerate from a dead stop on this slope when carrying rated load and continue to a second horizontal surface with no contact (except the tires) between the truck and ground.

3.2.8 Fork tilt. "With no load on the forks, the mast or carriage shall have a minimum forward tilt of 2° and a minimum rearward tilt of 4°. Positive means shall be furnished to prevent cavitation of the tilt cylinders.

3.2.9 <u>Upright height</u>. Collapsed mast height of unloaded truck measured from the ground to the top of the uprights in a vertical position shall not exceed 95 inches.

3.2.10 <u>Lift height</u>. The lift height with rated load on the forks and the forks horizontal shall be at least 205 inches.

3.2.11 <u>Free lift height</u>. Height of the unloaded forks , without increasing the specified collapsed mast height, shall not be less than 40 inches.

3.2.12 Lift assembly drift. The lift assembly shall be capable of holding the rated load at maximum height for 10 minutes with not more than one inch of vertical drift and not more than  $1^{\circ}$  of rotational drift from the vertical.

3.2.13 <u>Stability</u>. The truck shall conform to stability requirements of ANSI B56.1.

3.3 <u>Recycled</u>, <u>reclaimed</u>, <u>and virgin materials</u>. Except when intended use of the item will be jeopardized by the use of reclaimed or recycled materials they shall not be excluded from the manufacturing of this truck.

3.4 <u>Paint</u>. The truck shall be primed and painted using standard commercial practices, except the final finish coating shall be color number 24052 of FED-STD-595. All exterior trim (wheel rims, rims on lights, etc.) shall match the exterior color and paint type.

3.5 <u>Walkway coating</u>. Floor plates and step surfaces shall be in accordance with ANSI B56.1.

3.6 <u>Identification marking</u>. Each truck shall be identified with an identification plate conforming to MIL-P-514, type I, style 1, composition C, of type I, grade A, class 1 material which shall be located in a visible and permanent location on the truck. The identifying data shall be securely attached to the truck with screws, bolts or rivets and shall be furnished and mounted by the contracted.

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3.7 Truck marking. Markings on the truck shall be black, color number 37038 of FED-STD-595. Characters shall be block-type capitals and Arabic numerals. Location, information and character size shall be as follows:

----- ----- -----Information Example Location Minimum Character ----- ----- <u>----</u>----<u>-----</u>----US Air Force On each side Agency 1 - 1 / 2and rear inches On each side 1-1/2 Registration 10D315 Number and rear inches Capacity 3,000 Pounds On each side 2 inches of mast NO RIDERS 2 inches On each side Safety of mast

3.8 <u>Identical items</u>. All forklifts furnished under this specification shall be physically and mechanically identical to the first article that is approved by the Government, except that product improvements incorporated in the contractor's product lines are permitted at no cost to the Government subject to the following:

(a) Physical and performance characteristics defined herein have not been infringed.

(b) New components involving Government selected repair parts are directly interchangeable with the superseded component or part.

(c) The Government is notified of all changes and alterations a minimum of 3% days in advance of production commitment dates and production effectivity, by serial number and date, has been identified.

(d) Appropriate changes are issued to the Government validating operating, maintenance and parts manuals.

3.9 <u>Workmanship</u>. The workmanship shall be high quality when compared to industry standards. There shall be no rough surfaces or edges on machined or flame cut pieces. Bolt holes shall be accurately punched or drilled and shall have all burrs removed. All welds shall be smooth and continuous and they shall transmit stress without permanent deformation or failure when the truck is subjected to normal service loading or the testing in section four of this document. The contractor's welders and welding procedures shall be qualified to meet the requirements of MIL-STD-248 or applicable welding codes of AWS or AMSE.

3.10 <u>Special tools.</u> The contractor shall identify and supply any special tools required for servicing and/or maintenance of the truck. There shall be one set of tools for each truck. Special tools are any tools that are peculiar to this truck and are not available on the commercial market.

#### 4. QUALITY ASSURANCE PROVISIONS

4.1 <u>Responsibility for inspection</u>. The contractor, with a Government representative present, is responsible for all inspections, demonstrations and evaluations specified herein. Except as otherwise specified in the contract, 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 the specification where such inspections are deemed necessary to assure supplies and services conform to prescribed requirements.

4.1.1 <u>Responsibility for compliance.</u> All items shall meet all requirements of sections 3 and 5. The inspection set forth in this specification shall become a part of the contractor's overall inspection system or quality program. The absence of any inspection requirements in the specification shall not relieve the contractor' of the responsibility of ensuring that all products or supplies submitted to the Government for acceptance comply with all requirements of the contract. Sampling inspection, as part of manufacturing operations, is an acceptable practice to ascertain conformance to requirements, however, this does not authorize submission of known defective material , either indicated or actual, nor does it commit the Government to accept defective material.

4.2 <u>Classification of inspection, evaluation and</u> <u>demonstrations</u>. Inspections, evaluations and demonstrations shall be classified as follows:

- (a) First article evaluation and demonstration (see 4.3).
- (b) Production run-in (see 4.5).
- (c) Inspection of packing (see 4.7).

4.3 <u>First article evaluation and demonstration</u>. Prior to delivery, the manufacturer shall make one forklift available for first article evaluation and demonstration. The forklift and its components shall be compared with this document, calculations and test data, to verify compliance with this Specification. The forklift shall then be subjected to a demonstration as specified herein. Permanent deformation, overheating, malfunction, failure to meet performance requirements, any wear evidenced by removal of material, failure to complete any demonstration or leakage of hydraulic oil in excess of Class 3 or 3D in accordance with SAE J1176, or leakage of lubricants shall be cause for rejection of the forklift.

## 4.4 Demonstrations .

4.4.1 <u>Demonstration conditions</u>. Unless otherwise specified herein, demonstration shall be at the ambient temperature and climatic conditions existing at the place of demonstration. Only that maintenance established by the contractor and submitted as a maintenance schedule prior to commencement of the demonstration shall be performed during the demonstration.

4.4.2 <u>Rated load</u>. During the demonstrations specified herein, the rated load shall be a 3,000 pound (plus 100, minus 0 pounds) cube, 48 inches (plus 1/2, minus 0 inches) with a center of gravity located at the geometrical center of the cube. The cube shall be provided by the contractor.

4.4.3 Maximum fork height, collapsed mast height, free lift height. With no load on the forks measure and record collapsed mast height and free lift height. With rated load raised to maximum lift height and forks horizontal, measure vertical distance to the top surface of the forks at the 24 inch load center. Nonconformance with 3.2.9, 3.2.10 and 3.2.11 shall be cause for rejection.

4.4.4 Lifting speed and lowering speed. Record time in seconds required to raise rated load from floor to maximum fork height. Record time required to lower rated load at maximum lowering speed from maximum fork height, stopping suddenly at 2 to 3 foot lift height. Measure and record distance in inches from floor to top surface of forks at this position and in fully lowered position. Record time required to lower unloaded forks from maximum fork height to fully lowered position. The raising and lowering shall be performed three times and averaged. Nonconformance with 3.2.1 and 3.2.2 shall be cause for rejection.

4.4.5 <u>Right angle turn</u>. Starting with the front of the rated load against a wall (or a line on the floor) and the forklift perpendicular to the wall, back the truck through a right angle  $(90^{\circ})$  turn. Mark the point where the outside envelope of the forklift is farthest from the wall during the turn. Measure the perpendicular distance from this point to the wall. If it exceeds 130 inches, this will be cause for rejection. Repeat the procedure turning in the opposite direction, again not exceeding 130 inches.

4.4.6 <u>Travel speed</u>. Operate the truck with rated load in carry position. Truck shall attain speed specified in both forward and reverse directions. The truck shall be driven a distance necessary to attain maximum speed prior to entering a measured distance of not less than 44 feet. The truck shall be driven over the measured course at least two times in each direction. The speed shall be the average of the two runs in each direction. Inability of the truck to attain the speed as specified in 3.2.6 shall be cause for rejection.

4.4.7 <u>Slope ascension</u>. Drive truck forward with rated load along a horizontal approach and on to a ramp of specified grade (see 3.2.7) and bring-to a complete stop halfway up the ramp. Start from a dead stop and proceed up the ramp to a second horizontal surface. Repeat the procedure without the load. Failure to meet the requirements of 3.2.7 shall be cause for rejection.

4.4.8 <u>Service brake</u>. Demonstrate that the service brakes can stop the truck with rated load in accordance with ANSI B56.1.

4.4.9 <u>Parking brake</u>. Demonstrate capability of parking brake to hold truck, both uphill and downhill, with rated load, on a 15 percent grade.

4.4.10 <u>Tilt.</u> Place truck without load on a flat level surface. Raise forks to an elevation of approximately 2 feet and place fork in horizontal position. Tilt carriage or mast to full forward position and record angle of tilt. Tilt carriage or mast to full rearward position and record angle of tilt. Nonconformance to 3.2.8 shall be cause for rejection.

4.4.11 Lift assembly drift. Operate the lift and tilt systems to heat the hydraulic fluid to normal operating temperature. Raise rated load to maximum fork height with forks horizontal. Hold for time specified in 3.3.12. Record vertical and rotational drift. Nonconformance to the requirements of 3.2.12 shall be cause for rejection.

4.4.12 <u>Stability.</u> Conduct 'forward stacking, 'forward travel, l 'lateral stacking, " and "lateral travel' tilting platform tests in accordance with ANSI B56.1. Nonconformance with the stability requirements of ANSI B56.1 shall be cause for rejection.

4.4.13 <u>Overhead guard height</u>. With no load on the truck, measure vertically from the floor to the highest point on the overhead guard. Nonconformance with 3.1.12 shall be cause for rejection.

4.4.14 Forward reach. Start with the rated load on the forks and the forks 2 to 4 feet above the floor and completely retracted toward the forklift. Mark the location of the tip on one fork on the floor, using a plump bob or other means. Extend the forks forward to the maximum forward reach position. Mark the location of the same fork tip on the floor. Measure 'between two spots, in a direction parallel to the longitudinal centerline of the forklift. Failure to meet the reach specified in 3.1.6.3 shall be cause for rejection.

4.4.15 <u>Forklift operation</u>. The forklift, carrying the rated capacity load, shall be operated for a minimum of 500 cycles over a surface paved with concrete, asphalt, macadam or equivalent. Each cycle shall consist of the following:

(1) Raise the rated load to the carrying position and tilt the mast rearward,

(2) Travel forward a sufficient distance to operate a minimum of 100 feet at maximum speed.

(3) Slow truck to safe speed and negotiate a  $90^{\circ}$  turn. Drive at least 30 feet, stop truck arid raise the load to maximum lift height at maximum lift speed.

(4) Lower the load at maximum lowering speed to the ground . Raise to carry position.

(5) Tilt the carriage to the full forward position and return to the full rearward position.

(6) Drive truck in reverse over the same course and return to initial start point. This constitutes one cycle. Repeat steps 2 thru 6 until 500 cycles have been completed.

(7) Two-hundred and fifty (250) cycles shall be performed making a right hand 90" turn, and 250 shall be performed making a left hand  $90^{\circ}$  turn.

(8)  $\,$  The key switch and horn shall be operated once each 50 cycles of operation.

Inability of the forklift to lift the rated load, overheating, leakage of hydraulic fluid in excess of Class 3 or 3D in accordance with SAE J1176, malfunction, any wear evidenced by removal of material, failure of any component, or failure to complete the operation shall be cause for rejection. Normal battery charges (see 3.1.4) are permitted, if required, to conduct the test. Inability to operate 8 continuous hours on one battery charge (without charging or replacing the battery) shall be cause for rejection.

4.5 <u>Production run-in</u>. Each forklift carrying a rated load shall be subjected to a production run-in and servicing as specified herein. Inability to complete the run-in, overheating, failure of any components, malfunction of any control, or evidence of leakage of hydraulic fluid in excess of Class 3 or 3D in accordance with SAE J1176 shall be cause for rejection of the forklift by the Government.

4.5.1 <u>Travel</u>. Demonstrate starting, ascending and descending a 15 percent ramp, steering, braking and high speed travel. Operate all lights, horns and brake system not less than two times during this demonstration.

4.5.2 <u>Mast assembly</u>. Demonstration maximum lifting and lowering speed and forward and rearward tilt of the forks. Each operation shall be performed at least three times with the rated load on the forks.

12

4\*5.3 <u>Servicing and adjustment</u>. Prior to delivery, the manufacturer shall service and adjust each forklift for customer operational use, including at least the following:

(a) Adjustment of mast assembly.

- (b) Adjustment of solid state control modules.
- (C) Adjustment of brake systems.
- (d) Adjustment of steering.

(e) Continuity check of the electrical system, including filling and charging the battery.

4.6 First article demonstration report. The contractor shall maintain first article demonstration report (see \$.2).

4.7 <u>Inspection of packaging.</u> Each truck shall be completely prepared for shipment, shall be inspected for the correct methods for presentation, packing and marking as specified in 5.1. 'Nonconformance to 5.1 shall be cause for rejection of packaging.

5.0 PACKAGING

5.1 <u>Preservation</u>, packaging and marking. Shall be as specified in the contract.

6.0 NOTES

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

6.1 <u>Intended use</u>. Trucks described herein are intended for stacking, unstacking and moving cargo in and around commissary warehouses. The trucks are intended for operation over paved and other hard surfaces.

6.2 <u>Ordering data</u>. Procurement document, documents should specify the following:

(a) Title, number and date of this specification.

(b) 'Time frame required for submission of first article truck (see 3.1.1).

(c) When Government will conduct tests and to what extent of testing (see 3.1.1) .

(d) Submitting first article demonstration report as required by the contracting officer (see 4.6).

(e) Issue of DODISS to be cited in the solicitation, and If required, the specific issue of individual documents referenced (see 2.1.1 and 2.2).

6.3 First article. When first article inspection is required , (see 3.1.1) the item(s) shall be selected as specified in the contract purchase order. The first article shall consist of the number of items specified in the contract or purchase order . The contracting officer will include specific instructions in the acquisition documents regarding arrangements for examinations, approval of first article test (see 4.3), and test results and the disposition of the first article. Invitation for bids should provide that the Government reserves the right to waive the requirements for samples for first article inspection to those bidders offering a product which has been previously acquired or tested by the Government, and that bidders offering such products, who wish to rely on such production or test, must furnish evidence with the bid that prior Government approval is presently appropriate for the pending contract.

6.4 <u>Parts support</u>. The contractor shall ensure replacement parts for the forklift will be available from the commercial market for a minimum, of 10 years from the date of delivery of the last truck on this contract.

6.5 <u>Subject term (key word) listing.</u>

Electric

Forklift

Sit-down operator

Truck

Custodian:

Air Force-99

Review activity:

Air Force-84

Preparing activity:

Air Force-84

Agent :

Air Force-99

Project 3930F013

# STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL

## INSTRUCTIONS

- 1. Une preparing activity must complete blocks 1, 2, 3, and 8. In block 1, both the document number and revision letter should be given.
- 2. The submitter of this form must complete blocks 4, 5, 6, and 7.
- 3. The preparing activity must provide a reply within 30 days from receipt of the form.

NOTE: This form may not be used to request copies of documents, nor to request waivers, or clarification of requirements on current contracts. Comments submitted on this form do not constitute or imply authorization to waive any portion of the referenced document(s) or to amend contractual requirements.

I RECOMMEND A CHANGE:	I. DOCUMENT NUMBER MIL-T-87998	2. DOCUMENT DATE (YYMMDD) 22 February 1990 .
DQCUMENT TITLE		

TRUCK, LIFT, FORK, ELECTRIC, NARROW AISLE REACH, STAND UP OPERATED, 3000 POUND CAPACITY

NATURE OF CHANGE (Identify paragraph number and include proposed rewrite, if possible. Attach extra sheets as needed.)



REASON FOR RECOMMENDATION

) Form 1426, OCT 89	Previous editions are obsolete.	198/29	
ADDRESS (Include Zip Code) WR-ALC/MMVRG Robins AFB, GA 31098-5609	IF YOU DO NOT RECEIVE A REPLY WITHIN 45 DAYS, CONTACT: Defense Quality and Standardization Office 5203 Leesburg Pike, Suite 1403, Falls Church, VA 22041-3466 Telephone (703) 756-2340 AUTOVON 289-2340	Defense Quality and Standardization Office 5203 Leesburg Pike, Suite 1403, Falls Church, VA 22041-3466	
LORGE CYPHERS	b. TELEPHONE (Include Area Code) (1) Commercial (2) AUTOVON (912) 926–3675 468–3675 .		
PREPARING ACTIVITY			
ADDRESS (Include 21p Code)	d TELEPHONE (Include Area Code) (1) Commercial (2) AUTOVON (If applicable) (7) AUTOVON		
NAME (Last, First, Middle Initial)	b. ORGANIZATION		
SUBMITTER			