

INCH-POUND

A-A-58068B

April 24, 2019

SUPERSEDING

A-A-58068A

February 12, 2014

COMMERCIAL ITEM DESCRIPTION

TRUCK, LIFT, FORK, ELECTRIC, SIT DOWN, SOLID TIRES,
6,000 POUND CAPACITY AT 24 INCH LOAD CENTER, 180 INCH MINIMUM LIFT
HEIGHT

The General Services Administration has authorized the use of this commercial item description, for all federal agencies.

1. SCOPE.

1.1 Scope. This commercial item description covers the general requirements for an electric, front wheel drive, rear wheel steer, sit down operator, solid tired, 6,000 pound at 24-inch load center capacity, forklift truck. The forklifts are intended for handling cargo in and around warehouses, loading platforms, and docks and on paved or other hard surfaces.

2. SALIENT CHARACTERISTICS.

2.1 Safety. The operator driven forklift shall be capable of operation within the accuracies, limits, and specifications herein. The forklift shall comply with ANSI/ITSDF B56.1, OSHA, and all other applicable standards in effect at the time of manufacture. A means shall be provided for securing both the operator, conforming to ANSI/ITSDF B56.1, and restraint devices designed to ensure the operator's upper body remains entirely within the protection of the overhead guard in the event of tip-over.

Beneficial comments, recommendations, additions, deletions, clarifications, etc. and any other data that may improve this document should be addressed to AFLCMC/EZSS, BLDG 28, RM 133, 2145 MONAHAN WAY, WPAFB, OH 45433-7017 or emailed to SPEC99@us.af.mil. Since contact information can change, you may want to verify the currency of this address information using the ASSIST Online database at <https://assist.dla.mil>.

AMSC N/A

FSC 3930

DISTRIBUTION STATEMENT A. Approved for public release. Distribution is unlimited.

2.2 Electrical requirements.

2.2.1 Battery and charger. The battery shall be 24, 36, or 48 volts. The battery shall have adequate capacity to provide not less than 8.0 hours of continuous operation under normal industrial use. The battery mounted half connector shall be equipped with "SB" locking half connectors. When specified (see 6.2), the forklift shall be shipped with an additional battery and/or battery charger. The additional battery shall be the same battery supplied with the forklift. The battery charger shall be compatible with the battery supplied and shall be able to fully charge a completely depleted battery over an 8-hour period.

2.2.2 Electrical rating. The forklifts are Type EE, unless otherwise specified as Type E (see 6.2), in accordance with UL 583.

2.3 Hydraulic system(s). A pressure relief protection device is required along with pump(s), cylinders, control valves, filter(s), reservoir, hoses, and all other components necessary to make a complete hydraulic system(s).

2.4 Uprights and carriage. With no load on the forks, the seated operator shall be able to see at least one fork tip at all lift heights and fork positions.

2.5 Fork positioner. The forks shall be capable of being positioned manually in the lateral direction without the need of tools. The fork spacing shall be no more than 14 inches when the forks are at their most closed position and not less than 40 inches when the forks are at their most spread position. These dimensions shall be measured to the outside edges of the forks.

2.6 Forks. Fork dimensions shall be 2.06 inches maximum thickness x 6.06 inches maximum width x 40.0 (+ or - 1.0) inches in length.

2.7 Side shift. A hydraulically powered fork side shifting mechanism shall be furnished. It shall be controlled by the seated operator, with at least 4.0 inches side shift each side of center (8.0 inches minimum total travel).

2.8 Load backrest. The load backrest, in conjunction with the forks and carriage, shall provide a vertical rear load guard at least 48 inches high, measured from the horizontal, load carrying surfaces of the forks.

2.9 Steering. Power steering shall be furnished.

2.10 Service brakes. Service brakes conforming to ANSI/ITSDF B56.1 shall be furnished.

2.11 Parking brake. Parking brake conforming to ANSI/ITSDF B56.1 shall be furnished.

2.12 Indicators. The truck shall be equipped with a battery discharge indicator and an hour meter, both visible to the seated operator.

2.13 Controls. All controls shall be in accordance with ANSI/ITSDF B56.1. All load motion controls shall be self-centering, that is they shall return to the neutral position when released.

2.14 External lights. There shall be at least two-sealed beam, 25 watts minimum, floodlights. One shall be facing forward, mounted on the upright or overhead guard, and one mounted in the rear, facing rearward.

2.15 Taillight. One combination stoplight and taillight shall be installed.

2.16 Horn. The horn shall be mounted in the center of the steering wheel.

2.17 Operator's overhead guard. The guard shall be in accordance with ANSI/ITSDF B56.1, including the falling-object-protective-structure (FOPS) requirements. Overhead guard height from ground to top of guard shall be 91 inches maximum.

2.18 Towing. A pin-type towing device shall be recessed in the center rear of the truck. The pin shall be capable of sustaining a rearward, horizontal force of at least three times the gross vehicle weight (GVW) of the forklift.

2.19 Electromagnetic interference (EMI) suppression. The forklift shall comply with the EMI requirements in MIL-STD-461: RE101 and RE102.

2.20 Painting. The forklift shall be primed and painted using standard commercial practices. Unless otherwise specified (see 6.2), the final color shall be yellow. All stenciled words, symbols or other markings (for example "6,000 POUND CAPACITY" or "LIFT HERE"), shall be black.

2.21 Walkway coating. Floor plates and step surfaces shall be coated with a non-slip coating compound or be furnished with a non-slip metal surface.

2.22 Lifting provisions. Lifting devices that provide a means of attaching a shackle or ring to the forklift for safe lifting shall be furnished to allow the truck to be lifted by a crane in its normal operating position. Each device shall be not more than 1.0-inch thick. The opening in the device shall be at least 3.0 inches in diameter. Each lifting device, when loaded as the truck will be picked up, shall withstand a load of 2.3 times the static load on each device. The words "LIFT HERE" shall be stenciled near each lifting device. If possible, the lifting devices may also be used as the tie down devices (see 2.23).

2.23 Tie down provisions. Tie down devices shall be furnished that withstand the following loads: 3.0 times the unloaded truck weight in the forward and aft directions, 2.0 times the unloaded truck weight in the downward direction, and 1.5 times the unloaded truck weight in both lateral directions. Each device shall withstand at least 1.5 times the loads in the previous sentence without breaking or rupturing. The devices shall be not more than 1.0-inch thick, and the opening in the device shall be at least 3.0 inches in diameter. The word "TIEDOWN" shall be stenciled near each tie down device. If possible, the tie down devices may also be used as the lifting devices (see 2.22).

2.24 Performance.

- a. Rated load. Shall be capable of safely handling a rated load of 6,000 pounds, 48 inches per side cube, with the center of gravity at the center of the cube. It shall be able to safely handle this rated load at all lift heights and fork side shift that the forklift is capable of attaining.
- b. Lifting speed. Shall be at least 18 feet per minute with rated load on the forks.
- c. Lowering speed. Shall be not less than 27 nor more than 80 feet per minute, with rated load on the forks.
- d. Right angle turn. With rated load on the forks and forklift positioned perpendicular to a wall and with the front of the load against the wall, the truck shall be able to back up and make a complete right angle turn (ending up parallel to the wall) within 156 inches.
- e. Travel speed. Shall be capable of traveling at least 5 miles per hour, in both forward and reverse directions, while carrying rated load on the forks.
- f. Slope ascension. With the forklift facing up the slope and with rated load on the forks, it shall be able to accelerate up a 15 percent (8.5 degrees) slope from a dead stop.
- g. Upright tilt. With no load on the forklift, the upright (or mast) shall have at least 2.0 degrees forward tilt and at least 6.0 degrees of rear tilt.
- h. Collapsed mast height. With no load on forks and forks on the ground, the measurement from ground to uppermost projection of the upright assembly shall be no more than 91 inches.
- i. Maximum lift height. With rated load on forks and forks horizontal, the forks shall be capable of raising at least 180 inches. This shall be measured from ground to the horizontal, lifting surfaces of the forks.
- j. Free lift height. With rated load on forks and with the inner mast or carriage assembly just beginning to exceed the specified collapsed mast height, the distance from the ground to the top surfaces of the forks shall be not less than 53.0 inches.
- k. Under clearance. With rated load on the forks and mast vertical, under clearance between the ground and the mast shall be at least 2.75 inches.
- l. Drift of load. With hydraulic fluid at normal operating temperature, lift assembly shall hold rated load at maximum lift height for at least 10.0 minutes with not more than 2.00 inches of vertical drift and not more than 1.5 degrees of rotational drift.
- m. Stability. The forklift shall meet the ANSI/ITSDF B56.1 "longitudinal stacking," "longitudinal travel," "lateral stacking," and "lateral travel" stability requirements.

2.25 Identification plate. An identification plate made of a corrosion resistive material shall be permanently installed at an easily accessible location. It shall contain the following information:

NOMENCLATURE:

MANUFACTURE'S NAME:

MANUFACTURER'S ADDRESS:

MANUFACTURER'S SERVICE PHONE NUMBER:

MANUFACTURER'S MODEL NUMBER:

MANUFACTURER'S SERIAL NUMBER:

DATE OF MANUFACTURE:

CONTRACT NUMBER:

NATIONAL STOCK NUMBER (NSN):

REGISTRATION NUMBER:

CAGE CODE:

2.26 Markings. All stencils, decals, plates, etc. normally provided on the manufacturer's standard forklift shall be included. This shall include, at a minimum, the forklift's capacity in pounds and all information, cautions, and warnings normally provided.

2.27 Tires. Tire loading shall not exceed those specified in the latest revision of the Tire and Rim Association Yearbook.

2.28 Tropical rust proofing. When specified (see 6.2), tropical rust proofing shall be provided. This should be considered a premium-rustproofing package usually consisting of an additional coating. The forklift shall be treated with a corrosion preventative compound complying with A-A-59295. Many of these vehicles are used in tropical/coastal environments and experience high humidity and salt spray. Therefore, they usually exhibit high levels of corrosion in the areas listed below. At a minimum, the following areas shall be coated:

- a. Cab, interior
- b. Cab, exterior
- c. Seams
- d. Welds
- e. Hidden recessed areas
- f. Locations where dissimilar metals come in contact
- g. Area above fuel tank(s)
- h. Engine oil pan & transmission oil pan
- i. Radiator support structure
- j. Battery box

3. REGULATORY REQUIREMENTS

3.1 Recycled, recovered, or environmentally preferable materials. Recycled, recovered, or environmentally preferable materials should be used to the maximum extent possible if the material meets or exceeds the operational and maintenance requirements and promotes economically advantageous life cycle costs. 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). However, used, rebuilt, or remanufactured components, pieces, and parts shall not be incorporated.

3.2 Green Procurement Program. Green Procurement Program (GPP) is a mandatory federal acquisition program that focuses on the purchase and use of environmentally preferable products and services. GPP requirements apply to all acquisitions using appropriated funds, including services and new requirements. FAR 23.404(b) states that the GPP requires 100% of EPA-designated product purchases (that are included in the Comprehensive Procurement Guidelines list) contain recovered materials, unless the item cannot meet appropriate performance standards or be acquired competitively within a reasonable timeframe and at a reasonable price. The prime contractor is responsible for ensuring that all subcontractors comply with this requirement.

4. PRODUCT CONFORMANCE PROVISIONS

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 marketplace, modified as necessary to comply with the requirements herein. The Government reserves the right to require proof of such conformance.

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

- a. First production inspection (see 4.2).
- b. Conformance inspection (see 4.3).

4.2 First production inspection. The first production forklift shall be subjected to the analyses, demonstrations, examinations, and tests described in 4.5.1 through 4.5.10.10. The contractor shall provide or arrange for all test equipment and facilities.

4.3 Conformance inspection. Each production forklift shall be subjected to the examination described in 4.5.1.

4.4 Inspection requirements.

4.4.1 General inspection requirements. Apparatus used in conjunction with the inspections specified herein shall be laboratory precision type, calibrated at proper intervals to ensure laboratory accuracy.

4.4.2 Data. During all testing specified herein, at least the following data, unless not applicable, shall be recorded at intervals not to exceed 30 minutes. Additional data or shorter intervals shall be provided as appropriate for any specific test.

- a. Date.
- b. Time started.
- c. Time finished.

d. Ambient temperature.

e. Ambient humidity.

4.4.3 Test rejection criteria. Throughout all tests specified herein, the forklift shall be closely observed for the following conditions, which shall be cause for rejection:

a. Failure to conform to design or performance requirements specified herein or in the contractor's technical proposal.

b. Any spillage or leakage of any liquid, including lubricant or hydraulic fluid, under any condition, except as allowed herein.

c. Structural failure of any component, including permanent deformation, or evidence of impending failure.

d. Evidence of excessive wear. If excessive wear is suspected, the original equipment manufacturer's (OEM's) specifications or tolerances shall be utilized for making a determination.

e. Evidence of corrosion or deterioration.

f. Misalignment of components.

g. Conditions that present a safety hazard to personnel during operation, servicing, or maintenance.

h. Interference between the forklift components or between the forklift, the ground, and all required obstacles, with the exception of normal contact by the tires.

i. Evidence of undesirable mobility characteristics, including instability in handling during cornering, braking, and while traversing all required terrain.

j. Shutdown faults from:

(1) Motor cooling system.

(2) Motor protective circuits.

4.5 Test methods.

4.5.1 Examination of product. Each forklift shall be examined to verify compliance with the requirements herein prior to accomplishing any other demonstrations or tests listed in 4.5. A contractor-generated, Government-approved checklist (part of the test procedure) shall be used to identify each requirement not verified by an analysis, certification, demonstration, or test and shall be used to document the examination results. Particular attention shall be given to materials, workmanship, dimensions, surface finishes, protective coatings and sealants and their application, welding, fastening, and markings. Proper operation of each forklift function shall be verified. Certifications and analyses shall be provided in accordance with Table I. Each production forklift shall be inspected to a Government-approved reduced version of the checklist.

TABLE I. Certifications and analyses

Paragraph	Required Certifications and Analyses
2.1 <u>Safety</u> .	Contractor certification that the forklift complies with all requirements in accordance with ANSI/ITSDF B56.1, OSHA standards in effect at time of manufacture, and all other applicable standards.
2.2.1 <u>Battery</u> .	Contractor certification that the battery supplied can operate the forklift under normal use for at least 8.0 hours of operation.
2.10 <u>Service brakes</u> .	Contractor certification that the forklift complies with the service brake requirement of ANSI/ITSDF B56.1.
2.11 <u>Parking brake</u> .	Contractor certification that the forklift complies with the parking brake requirement of ANSI/ITSDF B56.1.

TABLE I. Certifications and analyses – Continued

Paragraph	Required Certifications and Analyses
2.13 <u>Controls</u> .	Contractor certification that the forklift controls comply with the controls requirement of ANSI/ITSDF B56.1.
2.17 <u>Operator's overhead guard</u> .	Contractor certification that the overhead guard is in accordance with ANSI/ITSDF B56.1. Contractor engineering analysis demonstrating the FOPS is in accordance with ANSI/ITSDF B56.1 (see 4.5.5).
2.18 <u>Towing</u> .	Contractor engineering analysis demonstrating the towing system is in accordance with the requirements of 2.18 (see 4.5.6).
2.22 <u>Lifting provisions</u> .	Contractor lifting provision analysis (see 4.5.8.1).
2.23 <u>Tie down provisions</u> .	Contractor tie down provision analysis (see 4.5.9.1).

4.5.2 Fork positioner mechanism. With no load on the forks, the forks shall be adjusted from their most closed position to most open position and then returned to most closed. The fork spacing shall be measured at the most open and closed positions to demonstrate compliance with 2.5. This shall be considered one cycle. This process shall be repeated until 100 cycles have been completed.

4.5.3 Dimension measurement. A first production forklift shall be measured to demonstrate compliance with the dimensional requirements of 2.6, 2.8, 2.17, 2.24(h), and 2.24(k).

4.5.4 Fork side-shifting mechanism. The forks shall be side shifted with the rated load on the forks from extreme left to extreme right position and back to extreme left 50 times. The forklift shall be capable of side shifting at least 4.0 inches off center, in both directions, throughout the fork spread specified in 2.7.

4.5.5 FOPS analysis. An engineering analysis shall be performed to demonstrate the FOPS is in accordance with the requirements of ANSI/ITSDF B56.1.

4.5.6 Towing pin analysis. An engineering analysis shall be performed to demonstrate the towing pin can sustain a force of at least three times the GVW of the vehicle.

4.5.7 Electromagnetic interference test. A first production forklift shall be tested in accordance with MIL-STD-461: RE 101 and RE 102 to demonstrate compliance with 2.19.

4.5.8 Lifting provision verification.

4.5.8.1 Lifting provision analysis. An engineering analysis shall be performed to demonstrate compliance with the lifting provision requirements of 2.22.

4.5.8.2 Lifting provision test. A first production forklift shall be tested to demonstrate compliance with the lifting provision requirements of 2.22.

4.5.9 Tie down provision verification.

4.5.9.1 Tie down provision analysis. An engineering analysis shall be performed to demonstrate compliance with the tie down provision requirements of 2.23.

4.5.9.2 Tie down provision test. A first production forklift shall be tested to demonstrate compliance with the tie down provision requirements of 2.23.

4.5.10 Functional tests.

4.5.10.1 Rated load. The rated load shall be weighed and measured to demonstrate compliance with 2.24(a).

4.5.10.2 Lifting and lowering speeds. The rated load shall be raised and lowered to demonstrate compliance with the lifting and lowering speed requirements of 2.24(b) and(c).

4.5.10.3 Right angle turn. The forklift shall handle the rated load in the load carry position and position the load such that the load is contacting perpendicular to a wall. The forklift shall be placed in reverse and make a complete right angle turn such that the forklift and load are now parallel to the wall. The distance between the wall and the component of the forklift closest to the wall shall be measured to demonstrate compliance with 2.24(d).

4.5.10.4 Travel speed. The forklift shall be operated on a level surface at maximum speed in both the forward and reverse directions with the rated load to demonstrate compliance with 2.24(e).

4.5.10.5 Slope ascension. A 15% slope shall be traversed at a speed of at least 1 mph, both uphill and downhill with the rated load, to demonstrate compliance with 2.24(f). While on the slope, the forklift shall be stopped and accelerated up the hill from a complete stop to a speed of at least 1 mph.

4.5.10.6 Upright tilt. On a level surface, the forks shall be raised to the maximum lift angle, and the forks shall be tilted fully forward. The tilt angle shall be measured to verify compliance with 2.24(g). The forks shall be lowered to the load carry position (see 6.4.1) and the forks shall be tilted to the full rearward position. The tilt angle shall be measured to verify compliance with 2.24(g).

4.5.10.7 Maximum lift height. With the rated load on the forks and with the forks level, the forks shall be lifted to their maximum lift height. The distance shall be measured from the ground to the top surface of one fork to determine the maximum lift height and demonstrate compliance with 2.24(i).

4.5.10.8 Free lift height. With rated load on forks and with the inner mast or carriage assembly just beginning to exceed the specified collapsed mast height, the distance from the ground to the

top surfaces of the forks shall be measured for compliance with 2.24(j).

4.5.10.9 Drift. The forks with the rated load shall be raised to the maximum lift height, with the forklift at ambient temperature. The forks shall be placed in the horizontal position and the engine shall be shut off. The distance from the ground to the top surface of one fork shall be measured. The forklift shall be allowed to sit for at least 10 minutes. After 10 minutes, the same distance to the same point on fork shall be re-measured to demonstrate compliance with 2.24(l).

4.5.10.10 Stability. The following stability tests shall be conducted in accordance with ANSI/ITSDF B56.1 to demonstrate compliance with 2.24(m): longitudinal stacking, longitudinal travel, lateral stacking, and lateral travel.

5. PACKAGING

5.1 Packaging. Preservation, packing, and marking shall be as specified in the contract or order.

6. NOTES

6.1 Source of documents.

6.1.1 Military Specifications, Standards, and Handbooks referenced herein may be obtained online at <https://quicksearch.dla.mil>.

6.1.2 Occupational Safety and Health Association (OSHA) documents may be obtained online at <https://www.osha.gov/>.

6.1.3 Electronic copies of the FAR may be obtained from <https://www.acquisition.gov/far/>.
Electronic copies of the DFARS may be obtained from
<https://www.acq.osd.mil/dpap/dars/dfarspgi/current/index.html>.

6.1.4 ANSI/EIA standards may be obtained at <https://www.ansi.org/> or <https://www.eia.org>.

6.1.5 Industrial Truck Standards Development Foundation (ITSDF) standards may be obtained from <https://www.itsdf.org/>.

6.2 Ordering data. Acquisition documents must specify the following:

- a. Title, number, and date of this document.
- b. Spare battery.
- c. Battery charger.
- d. Type "E" electrical rating (see 2.2.2).
- e. Color Forest Green 24052 SAE-AMS-STD-595 (see 2.20).
- f. Tropical rust proofing.

6.3 Key Words.

Battery powered

Hour meter

Yellow

6.4 Definitions.

6.4.1 Load carry position. The carry position is defined as the forks at maximum rear tilt and heel of forks 24 inches above the ground.

MILITARY INTERESTS:

Custodians:

Army – AT

Navy – SA

Air Force –184

Preparing Activity:

Air Force – 184

Reviewers:

DLA – IS

Agent:

Air Force – 99

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