INCH–POUND
A-A-59831
21 August 2009

COMMERCIAL ITEM DESCRIPTION

TRUCK, LIFT, FORK, ELECTRIC, SIT DOWN, SOLID TIRES, 4000 POUND CAPACITY AT 24 INCH LOAD CENTER, 144 INCHES MINIMUM LIFT HEIGHT

The General Services Administration has authorized the use of this Commercial Item Description (CID) for all federal agencies.

1. SCOPE

1.1 Description. This Commercial Item Description (CID) covers the general requirements for an electric, front wheel drive, rear-wheel steer, sit down operator, solid tired, 4000 pound at 24 inch load center capacity, forklift truck. It will be Type E, unless otherwise specified as Type EE or Type EX, in accordance with UL 583. It will be used for handling cargo in and around warehouses, loading platforms, docks, and on paved or other hard surfaces.

2. CLASSIFICATION.

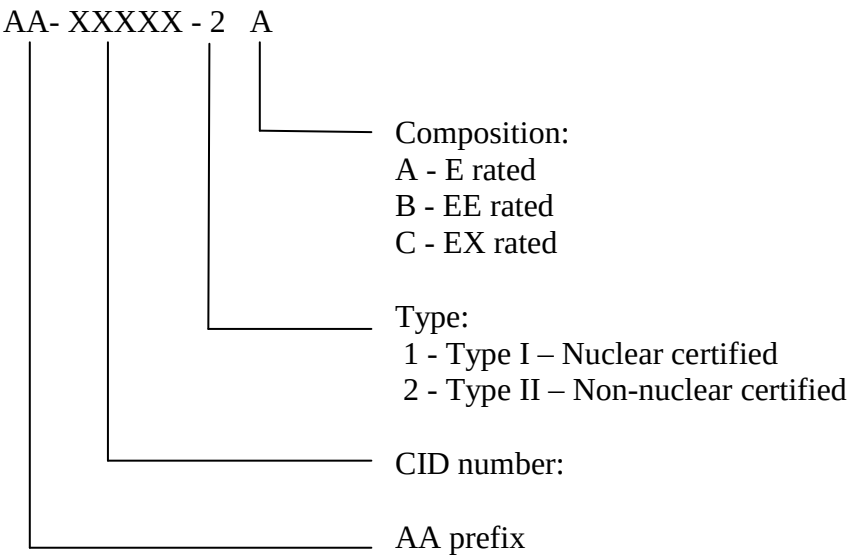
2.1 Classification. The forklifts shall be one of the following types and classes, as specified (see 6.2).

2.1.1 Types. The types of forklifts are as follows:
Type I - Nuclear certified
Type II – Non-nuclear certified

2.1.2 Class. The classes for forklifts are as follows:
Class A: E rated
Class B: EE rated
Class C: EX rated

2.2 Part or Identifying Number (PIN). The following PIN procedure is for government purposes and does not constitute a requirement for the contractor. The PIN to be used for spring loaded pressure relief valves acquired to this CID is created as follows:

Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: 642 CBSG/GBEC, 460 Richard Ray Blvd, Suite 200, Robins AFB, GA 31098-1813



3. SALIENT CHARACTERISTICS

3.1 Safety. The forklift shall comply with ANSI/ITSDF B56.1 and OSHA standards in effect at the time of manufacture. The forklift shall comply with UL 583, E rated. When specified (see 7.3), the forklift shall comply with UL 583, EE rated or UL 583, EX rated. A commercial fire extinguisher shall be mounted on the truck in an easily accessible location. The fire extinguisher shall be a minimum 2-1/2 pound capacity ABC type, or equivalent. The fire extinguisher shall be UL listed. An operator's seatbelt conforming to SAE J 386, and restraint devices designed to ensure the operator's upper body remains entirely within the protection of the overhead guard in the event of tipover shall be provided. Unless otherwise specified (see 7.3), the final color shall be yellow for safe operation in an indoor environment.

3.1.1 Design and Safety (Type I). In addition to the requirements of 3.1, the forklift shall also meet the requirements of Air Force Manual 91-118. The forklift shall be designed for a structural safety factor (based on yield strength) of at least 3 times the rated load, or maximum dynamic load multiplied by a factor of 2, whichever is greater. The forklift shall be designed to minimize the transmission of mechanical shock to loads in all modes of operation.

3.2 Environmental requirements. The truck shall be capable of operating in temperatures ranging from 0 degrees F to +125 degrees F. When specified (see 7.3), the forklift shall be winterized to –25 degrees F. As a minimum, a cab, cab heater, and windshield defroster shall be provided.

3.3 Battery. The battery shall be a commercially available 48, 72, or 80 volts. The battery shall be at least 500 amp hours. The battery-mounted, half connector shall be "SB" type. When specified (see 7.3), the truck shall be shipped with the following items: additional battery and/or battery charger.

3.4 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. The hydraulic system shall also be designed to prevent forward tilt in the event of system failure; tilt angle shall not deviate more than two degrees if failure occurs at any position during load handling operations.

a. Type I, The hydraulic lift system shall be designed so that in the event of hydraulic hose or pump failure, the lift system will automatically prevent load lowering. A manual override for load lowering and tilt functions shall also be provided to safely lower the load and provide for load removal; lowering speed of the forks shall not exceed eight (8) inches per second under any load conditions.

b. Type II, The hydraulic lift system shall be designed so that in the event of hydraulic hose or pump failure, the load shall not descend (freefall) at an uncontrolled rate; lowering speed shall not exceed eight (8) inches per second under any load condition. A manual override for the tilt function shall also be provided to allow for load removal.

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

3.6 Forks and carriage. Fork tines shall have the following standard dimensions. The forks shall be mounted so that when fully lowered and forklift operating in reverse, there is no damage or degradation to the fork tines, their attachment, or any other component of the carriage, including fork positioner and side shift. When specified (see 7.3), optional forks shall be furnished.

Standard Forks
a. Length: 48 ± 1 inches
b. Width: 4.0 inches (maximum)
c. Thickness: 1.5 inches (maximum)

Optional Forks (user specified dimensions)
a. Length: 36 to 60 inches
b. Width: 4.0 to 5.0 inches
c. Thickness: 1.5 to 2.0 inches

3.7 Fork spacing. Manual forklift shall have manual fork positioning.

a. Type I. Forks shall allow tine spacing of 12 inches (or less) to 45 inches (or more), measured between centerlines of the forks.
b. Type II. Forks shall allow tine spacing of 12 inches (or less) to 32 inches (or more), measured between centerlines of the forks.

3.8 Side shift. A hydraulically powered side shift capability shall be furnished. It shall be controlled by the seated operator, and shall provide at least four-inch side shift capability each side of center (or 8.0 inches minimum total travel) with rated load on the forks.

3.9 Load backrest. The load backrest, in conjunction with the forks and carriage, shall provide a vertical rear load guard of at least 48 inches high, measured from the load carrying surfaces of the forks. Load securing rings or eyes shall be provided on both the left and right sides of the backrest and located not less than 15 to not more than 25 inches above the load carrying surface of the forks. Safety factor for the load securing devices shall not be less than 3 to 1, based on yield strength, assuming each device is loaded equally. Ring or eye opening shall be determined using MIL-STD-209. The load securing device, when not in use, shall not extend forward of any

surface on front face backrest. The backrest assembly/load securing device combination shall be capable of withstanding a horizontal force (at load securing devices) equal to three times the truck capacity without failure or permanent deformation of carriage assembly (see 5.3.21).

3.10 Steering. Power steering, with emergency steering in the event of power failure, shall be furnished.

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

3.11.1 Service brakes (Type I). The service brakes shall also be capable of holding the forklift, with rated load, on a minimum 20% grade (11.3 degree) without assistance of the parking brake.

3.12 Parking brake. Parking brake shall conform to ANSI/ITSDF B56.1.

3.12.1 Parking brake (Type I). In addition to the requirements of 3.12, the parking brake shall be independent of the service brake system and shall be capable of holding the forklift, with rated load, on a minimum 20% grade (11.3 degree).

3.13 Electrical system. A 48, 72, or 80 volt direct current (VDC) electrical system shall be furnished. The electrical system shall consist of all electrical components necessary for operation of the forklift. The forklift shall have sufficient electrical grounding to prevent static discharge.

3.13.1 Backup alarm. An audible backup alarm shall be furnished. The alarm shall automatically activate when the transmission selector is placed in reverse.

3.14 Instruments and controls. In addition to the instruments supplied on the standard commercial forklift, an hour meter shall be installed in the instrument panel. Except the hour meter, all instruments shall illuminate. All load motion controls shall be right hand operation controls and of the self-centering type, i.e., controls shall return to the neutral position when released.

3.15 Lighting. Minimum two sealed beam floodlights, one facing forward and one facing rearward, shall be furnished. Tail light(s) and brake stop light(s) shall be installed. All lights shall be protected by location or guards. Individual operator controlled switches shall be provided for front floodlight, and rear floodlight.

3.16 Horn. Horn button shall be mounted in the center of the steering wheel.

3.17 Operator's overhead guard. The guard shall be in accordance with ANSI/ITSDF B56.1. It shall also be a falling-object-protective-structure (FOPS) conforming to ANSI/ITSDF B56.1. Overhead guard height from ground to top of guard shall be 88 inches maximum.

3.18 Cab. When specified (see 7.3), the forklift shall be equipped with an enclosed cab that shall incorporate FOPS requirements of ANSI/ITSDF B56.1. The cab shall have a door on each side of the vehicle with at least one window per door which can be opened for ventilation. The doors shall be capable of being locked in either the opened or closed positions. In addition to the door windows, the cab shall be furnished with a front windshield, rear window, and roof window. The windshield and all windows shall be safety glass. The cab interior shall be

furnished with water-resistant non-absorbent thermal insulation. The manufacturer's heaviest duty heater and defroster shall be furnished. There shall be at least two wipers furnished, one on the front windshield and one on the rear window.

3.19 Tires. The tires shall be pneumatically-shaped solid tires. Tire loading shall not exceed those specified in the Tire and Rim Association Yearbook.

3.20 Performance. The truck shall be capable of meeting the following performance requirements:

a. Capability to safely handle a 4,000 pound, 48 inch per side cube with the center of gravity at the center of the cube. It shall be able to handle this load at all lift heights and side shift positions that the forklift is capable of attaining.
b. Lifting speed: Shall be capable of raising the rated load at least 7.0 inches per second.
c. Lowering speed: Shall be not more than 16 inches per second with rated load on the forks and not less than 4 inches per second with no load and with engine at idle speed.
d. Right angle turn: With rated load on the forks, 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 160 inches.
e. Travel speed: Shall travel at a speed of at least 5 miles per hour (mph) and at most 15 mph, in both forward and reverse directions, while carrying rated load on the forks. The vehicle speed shall be governed so that maximum speed for safe operations is not exceeded.
f. Slope ascension: With the truck facing up the slope and with rated load on the forks, the truck shall be able to accelerate up a 15% (8.5 degree) slope from a dead stop.
g. Upright tilt: With no load on the truck, the forks shall have at least 5.0 degrees of forward tilt, and at least 5.0 degrees of rear tilt.
h. Upright height (collapsed mast height) and Maximum fork lift height: With no load on the forks and the forks on the ground, the maximum upright height shall be 88 inches. The maximum fork “lift height” shall be at least 144 inches with rated load on the forks and the forks horizontal.
i. Free lift height: The height that the forks can raise the rated load before the collapsed mast height is increased shall be at least 45.0 inches.
j. Ground clearance: With rated load on the forks and mast vertical, ground clearance beneath the mast shall be at least 3.0 inches. With no load on the forks, the ground clearance of the truck other than the mast and axles shall be at least 4.0 inches.
k. Load drift: With hydraulic fluid at normal operating temperature, the lift assembly shall hold rated load at maximum lift height for at least 10.0 minutes with not more than 1-¾ inch of vertical drift, and not more than 1.0 degree of rotational drift.
l. Stability: The forklift shall meet the ANSI/ITSDF B56.1 "forward stacking", "forward travel", "lateral stacking", and "lateral travel" stability requirements.
m. Noise limits: Maximum allowable noise level shall not exceed 84 dB(A) at the operator's ear. If the noise level at the operator's ear exceeds 84 dB(A) (85 to 92 dB(A)), a permanent warning decal or placard shall be installed inside the cab clearly visible to the operator. Noise level limits that exceed 92 dB(A) are not acceptable.

3.21 Painting. The forklift shall be primed and painted using standard commercial practices. The final paint shall be a standard, commercially available polyurethane. The paint finish shall

show no evidence of uneven application, curtains, runs snags, orange peel, lack of adhesion, or other defects. The color shall be the manufacturer's standard color. If any components on the truck are not painted, the components shall have a commercially available, protective coating (such as zinc plating). When specified (see 7.3), the manufacturer shall make color 24052 of FED-STD-595 available.

3.22 Identification plates. Corrosion resistant identification plate shall be permanently installed on the vehicle. The identification plate shall contain the following information:

Nomenclature:
Make and Model:
Manufacturers Serial Number (VIN):
Registration Number:
National Stock Number (NSN):
Vehicle Curb Weight (lbs):
Payload, Maximum (lbs):
Gross Weight, Maximum (lbs):
Date of Delivery:
Warranty (months/miles):
Contract Number:
Ship to _____ Mark for _____
U S Property

3.23 Walkway coating. Floor plates and step surfaces shall be coated with a nonslip coating compound, or be furnished with a nonslip metal or treadplate surface.

3.24 Lifting and tiedown provisions. There shall be permanently installed lifting devices that enable the forklift to be lifted in its normal travel configuration, and tiedown devices that enable the forklift to be tied down to the floor of the transportation media. All devices shall have an inside diameter of 3.0 inches and minimum structural safety factor of 2:1, based on static load. The notation "LIFT HERE" and "TIEDOWN" shall be stenciled, in black, near each lifting and tiedown device.

3.25 Electromagnetic interference (EMI).

a. Type I. The forklift shall comply with the EMI requirements shown in table I.

TABLE I. Electromagnetic interference (EMI)

Name	Description	Parameters
MIL-STD-461	Compatibility	N/A
RE-102	Emissions	(Frequency Range: 2 MHz to 18 GHz)
RS-103	Susceptibility	(Frequency Range: 30 MHz to 18 GHz) 10 V/m (100 kHz to 1 GHz) 50 V/m (above 1 GHz)

b. Type II. The forklift shall comply with the EMI requirements shown in table II.

TABLE II. Electromagnetic interference (EMI)

Name	Description	Parameters
SAE J551-1	Compatibility	N/A
CISPR 12 & CISPR 25	Emissions	(Frequency Range: 30 to 1000 MHz)
SAE J551-11	Susceptibility	(Frequency Range: 100 kHz to 18 GHz) 20 V/m (100 kHz to 200 MHz) 50 V/m (above 200 MHz)

3.26 Highway transportability. The truck, when loaded on a semitrailer, shall be within the highway permit limits for all states.

3.27 Workmanship. The truck shall withstand any operation specified herein without permanent deformation, breakage of connections, malfunction, or component interference caused by incorrect workmanship. Riveted and bolted connections shall be adequately designed. Welding shall be performed by a certified welder.

3.28 Tropical rust proofing. When specified (see 7.3), tropical rustproofing shall be provided. This should be considered a premium rustproofing package usually consisting of an additional coating. The truck shall be treated with a corrosion preventative compound complying with A-A-59295. A copy of A-A-59295 can be requested from WR-ALC 542 CSW/642 CBSG. 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, these areas shall be coated.

1. Cab, interior
2. Cab, exterior
3. Seams
4. Welds
5. Hidden recessed areas
6. Locations where dissimilar metals come in contact
7. Area above fuel tank(s)
8. Engine oil pan & transmission oil pan
9. Radiator support structure
10. Battery box

3.29 Nuclear Certification Testing (Type I). If one of the following conditions is met then the forklift must undergo a full first-article test process outlined in section 4:

1. The manufacturer has not previously produced such a forklift for the Air Force.
2. The forklift has not been previously purchased by the Air Force.
3. The forklift has been upgraded/modified in any way to affect Form, Fit, or Function from previous production models on contract.
4. The forklift has not been purchased within a 60 month time frame from a previous first article test. Assuming the forklift has not changed from the configuration that had been previously tested.

4. REGULATORY REQUIREMENTS 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 in the forklift.

5. PRODUCT CONFORMANCE

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

5.1.1 Type I. Unless otherwise specified (see 7.3) the contractor is responsible for the performance of all inspections and testing specified herein, at his own or other facilities of his choosing. Government representatives shall witness all testing specified in Section 5 of this document.

5.2 Responsibility for compliance (Type I). All trucks on the contract shall meet all requirements of this document. The contractor shall comply with all requirements of this document, whether or not there is a corresponding inspection requirement in Section 5 of this document.

5.3 First article inspection (Type I). The first article truck and its components, contractor drawings and literature, and vendor literature shall be compared to Section 5 of this document to verify compliance. The truck shall then be subjected to the demonstrations and test specified in 5.3.1 through 5.3.22.

5.3.1 Demonstrations and test (Type I). The following demonstrations and tests may be performed in any order, as determined by the contractor. The forklift shall be examined to determine compliance with this document. Occurrence of any of the following conditions during the testing specified herein shall be cause for rejection of the truck:

a. Inability to meet specified performance requirements or inability to complete any test.
b. Permanent deformation, over-heating, malfunctions, leakage of lubrications, hydraulic fluid, etc, in excess of Class 3, for dust free conditions and Class 3D for dusty conditions in accordance with SAE J1176.
c. Any binding, jerking, or uneven operation of any component or system.
d. Any wearing, galling, gouging or other material removal.
e. Any unsafe operation that jeopardizes the operator or forklift.

5.3.2 Demonstration conditions (Type I). Unless otherwise specified (see 7.3), demonstrations shall be conducted at the ambient temperature and climatic conditions existing at the place of demonstration. Only that maintenance established by the contractor shall be performed during the demonstration. All distance and time measurements, and other required data obtained during the testing shall be recorded and included in the first article test report.

5.3.3 Rated load. The rated load shall be a 4,000 pound (+200, -0) pound cube with a center of gravity located at the geometrical center of the cube. The cube shall be sized to provide a 24 inch load center on the forks.

5.3.4 Maximum fork lift height. With rated load and forks level, raise forks to their maximum lift height. Measure from ground to top surface of one fork and determine maximum lift height. Failure to obtain a minimum 144 inch lift height shall be cause for rejection.

5.3.5 Lifting and lowering speed (Type I). Measure distance from ground to top surface of forks in fully lowered position. Measure time required to raise rated load from ground to maximum lift height. Subtract distance from ground to top surface of forks from maximum lift height, and calculate lifting speed. Lower rated load, at maximum lowering speed (fully open lowering control) and abruptly stop the load at 1 to 2 foot height. Record this time. Measure distance from ground to top surface of one fork. Subtract this figure from the maximum lift height and calculate loaded lowering speed. Remove load and raise forks to maximum lift height. Measure time required to lower forks to ground level. Calculate the unloaded fork lowering speed. Nonconformance with Section 3.20 shall be cause for rejection.

5.3.6 Travel speed (Type I). Operate the truck at maximum speed in both forward and reverse directions with rated load in load carry position. Inability to safely obtain 5 mph, or exceeding 15 mph shall be cause for rejection.

5.3.7 Longitudinal slope operation (Type I). Drive the truck forward with rated load in uphill position onto a ramp, hill, or other suitable surface with a minimum 15 percent (or 8.5 degree) slope. Stop the truck on the slope, then accelerate up the slope reaching a steady measured speed. The truck shall descend the slope, with the load in the uphill position, at a safe, measured speed.

5.3.8 Drift (Type I). Raise rated load to maximum lift height, with hydraulic fluid at ambient temperature. Place forks in horizontal position and shut off engine. Measure from ground to top surface of one fork. Let truck sit for a minimum 2.0 minutes. Using the same fork and reference points, measure from ground to top surface of fork. Vertical drift exceeding 1-3/4 inches, or rotational drift exceeding 1.0 degrees, shall be cause for rejection.

5.3.9 Right angle turn (Type I). With rated load on forks, position the truck so that it is perpendicular to a wall with the load facing the wall. Using the wall as a reference, measure a point 160 inches perpendicular from the wall. Mark location and other points 160 inches away from the wall so that a line parallel to the wall can be formed. Back vehicle so that a full right turn can be accomplished to the point the forklift is positioned parallel to the wall. Any portion of the forklift or load that extends beyond the 160 inch line shall be cause for rejection. Repeat test for left turn.

5.3.10 Fork tine operation (Type I). Measure both forks for length, width, thickness, thickness at tip, and bottom taper. Demonstrate side-shift capability through its full range. Repeat at least five times each for unloaded and at rated capacity. With rated load on forks, raise forks to maximum lift height, then lower at maximum lowering speed and quickly stop at one to two feet above ground level. Repeat at least five times. Occurrence of any condition listed in 5.3.1 shall be cause for rejection. Position unloaded forks approximately horizontal and 3 to 5 inches above ground level. Measure fork tilt. Without touching the tilt control lever, raise forks to maximum fork height, then lower to original position. Verify that the forks maintain the same tilt while being raised and lowered. Repeat procedure with rated load on forks and forks at approximately five degrees rear tilt. Inability to maintain the fork tilt shall be cause for rejection.

5.3.11 Stability (Type I). Conduct the "longitudinal stability stacking", "longitudinal stability travel", "lateral stability stacking", and "lateral stability travel" tilting platform tests of ANSI/ITSDF B56.1. Failure to meet the minimum tilting requirements specified in ANSI/ITSDF B56.1 shall be cause for rejection.

5.3.12 Electromagnetic interference (EMI) (Type I). Test the truck to determine compliance with MIL-STD-461 RE102 and RS103. Failure to meet requirements shall be cause for rejection.

5.3.13 Service brakes (Type I). Demonstrate that the service brakes can stop the truck, with rated load, in accordance with ANSI/ITSDF B56.1. Position forklift, with rated load, on a minimum 20% incline (11.3 degree) and demonstrate the service brake system can hold the truck. Maintain position for one minute without assistance from the parking brake system. Failure to meet ANSI/ITSDF B56.1 requirements, or inability to maintain the forklift position on the incline shall be cause for rejection.

5.3.14 Parking brake (Type I). Demonstrate that the parking brake can hold the truck, with rated load, on a minimum 20% incline (11.3 degree) without assistance from the service brake system. Maintain position for at least three (3) minutes. Inability to maintain the forklift position shall be cause for rejection.

5.3.15 Starter disconnect switch (Type I). Start the engine and let it run for at least 10 seconds. Energize the starter switch (move to "off" then "on" position if applicable) while the engine is running. Any evidence of starter engagement while the engine is running shall be cause for rejection. With the engine not running, place transmission selector in the lowest forward gear and energize the starter switch. Repeat for all forward and reverse gears. Any evidence of starter engagement while transmission is in any gear shall be cause for rejection.

5.3.16 Overload (Type I). Perform a stress analysis of the truck to determine all critical stress points. Apply strain gauges or other suitable instrumentation at all the critical stress points to measure stress during the test. Place truck on a level surface and position forks at least 24 inches above ground level with the forks centered on the carriage. Position supports under the frame or front axle to relieve load on front tires, and secure the rear of the truck to compensate for the additional test load. For the test load, use 3 times the rated load or 2 times the maximum dynamic load, whichever is greater. Apply this test load to the forks. Let overload remain on the forks for at least 10 minutes. Remove the load and inspect truck structure, frame, mast, and hydraulic system for deformation, cracks, broken welds, hydraulic fluid leaks, etc. Inspect forks a minimum of six (6) inches on either side of heel by magnetic particle or dye penetrant method. Record readings from strain gauges and convert to, and record, the corresponding stresses. Failure to meet these requirements shall be cause for rejection. Include results of the stress analysis that determined the stress caused by the static and dynamic loads in the first article test report. The entire stress analysis is not necessary, just the location of critical stress points.

5.3.17 Fail safe hydraulic lift system (Type I). Raise the rated load to maximum lift height with forks level. Measure vertical distance from ground to top surface of one fork. No personnel shall be under or in front of the load during the next step. Disconnect hydraulic line(s) that supply pressure to the lift system. Re-measure vertical distance from ground to same point on fork surface. A drop of more than 1/2 inch shall be cause for rejection. Measure fork tilt. Disconnect hydraulic line(s) that supply pressure to prevent forward tilting. Remeasure fork tilt.

A change of more than 1.0 degrees of tilt shall be cause for rejection. Use the manual override provided to lower rated load to ground.

5.3.18 Fork lifting mechanism (Type I). Raise the rated load from ground level to maximum lift height and lower back to ground. This shall be considered one cycle. Repeat until 100 cycles have been completed. This is a severe test of the hydraulic system so raising and lowering may be stopped after every 10 cycles to allow cooling of the hydraulic system. Inability to complete the test, binding or erratic movement, any failure of the lifting system, or overheating of the hydraulic fluid shall be cause for rejection.

5.3.19 Fork spacing and side shift mechanism (Type I). The forks on rigid frame trucks shall be side shifted with the rated load from extreme left to extreme right position, and back to extreme left. This shall be considered one cycle. Repeat until 100 cycles have been completed. This is an extreme test of the hydraulic system and side shifting may be stopped after 20 cycles to allow cooling of the hydraulic fluid. For side shifting, any binding, erratic movements, inability to complete the test, failure of the system, or overheating of the hydraulic fluid shall be cause for rejection.

5.3.20 Air transportability verification (Type I). Verify the forklift can meet all air transportability requirements, including tiedowns, negotiation of ramps, and dimensional and weight limitations. Inability to meet requirements shall be cause for rejection. Refer to MIL-HDBK-1791 as a Guide

5.3.21 Load backrest restraints (Type I). Apply a forward, horizontal force of 3.0 times rated load to load restraint devices for 10 minutes. The test load may be applied to all devices at once, or 3.0 times the proportional share of the load may be applied to each device. Remove load and inspect restraint devices, welds and supporting structure for deformation, cracks, broken welds, etc, which shall be cause for rejection.

5.3.22 Travel (Type I). The truck shall be driven at least 1.0 miles at varying speeds, including maximum speed. At least five right and five left turns shall be made at maximum turn angle. During the test, the horn, windshield wipers, lights, heater, defroster, and other components shall be operated. Occurrence of any conditions listed in 5.3.1, or in-operability of any component listed, shall be cause for rejection.

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

6.1. Preservation, Packaging, Labeling and Marking. Unless otherwise specified (see 7.3), the preservation, packaging, and packing shall be to a degree of protection to preclude damage to containers and/or contents thereof under normal shipping conditions, handling, etc. This involves shipment from the supply source to the receiving activity, and reshipment from the receiving activity. The preservation, packaging, and packing shall conform to applicable carrier's rules and regulations. Intermediate and exterior package quantities, labeling and marking shall be as specified in the contract and/or order.

7. NOTES

7.1 Intended use. This CID covers the general requirements for an electric, front wheel drive, rear wheel steer, solid tired, 4000 pound capacity, forklift truck. The forklift is intended for handling cargo in and around warehouses, loading platforms, docks and on paved or other hard surfaces.

7.2 Sources of Documents.

7.2.1 Government documents. Copies of Department of Defense and Federal documents are available online at http://assist.daps.dla.mil/quicksearch/ or http://assist.daps.dla.mil or from Standardizations Documents Order Desk, 700 Robbins Avenue, Building 4D, Philadelphia, PA 19111-5094.

7.2.2 ITSDF Standards. Copies of ITSDF standards may be obtained from www.itsdf.org or the Industrial Truck Standards Development Foundation, Suite 460, 1750 K Street NW, Washington, DC 20006.

7.2.3 SAE Standards. Copies of SAE standards may be obtained from www.sae.org or the Society of Automotive Engineers, 400 Commonwealth Drive, Warrendale, PA 15096.

7.2.4 TRA Standards. Copies of TRA standards may be obtained from www.us-tra.org or the Tire and Rim Association, 175 Montrose West, Suite 150, Copley, OH 44321.

7.2.5 UL Standards. Copies of UL standards may be obtained from www.ul.com or the Underwriters Laboratories, Inc., 333 Pfingsten Road, Northbrook, IL 60062-2096.

7.3 Ordering data. Procurement documents should specify the following:

a. Title, number, and date of this specification
b. Type and class of forklift, if different (see 2)
c. Vehicle color, if different (see 3.1 & 3.21)
d. Winterization, if required (see 3.2 & 3.18)
e. Additional battery, if required (see 3.3)
f. Battery charger, if required (see 3.3)
g. Optional forks, if required (see 3.6)
h. Enclosed cab (see 3.18)
i. Tropical Rustproofing (see 3.28)
j. Inspection and testing responsibility, if different (see 5.1.1)
k. Demonstration conditions, if different (see 5.3.2)
l. Packaging requirements, if different (see 6.1)

7.4 Keywords

Front wheel drive
Hydraulic
Rear-wheel steer

MILITARY INTEREST:

Custodian:
Air Force - 84

Preparing Activity:
Air Force - 84

Agent:
Air Force - 99

(Project 3930-2009-003)

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at http://assist.daps.dla.mil .