DFP-578
Rev B
12 December 2012

US Army ARDEC
Battlefield Tools and Equipment Division
Description For Purchase
for
Dolly Floor Jack
For Automotive Service Application
10 Ton Rated Capacity
(NSN 4910-00-289-7233)

1. SCOPE

1.1 Scope. This Description for Purchase (DFP) describes the performance and design characteristics, required by the Government, of commercially available, manually operated, hydraulically powered, full chassis length, dolly floor jacks of 10 ton rated capacity used in automotive service applications. Short chassis jacks, end lifts, transmission lifts, bottle jacks and other lifting devices not meeting the requirements herein are not included in this document and will not be considered as appropriate products to fill the Government's needs relating to this product and its known uses.

1.2 Classification. The jack described in this DFP is a standard commercial automotive 10 ton capacity service jack of the dolly floor type meeting the requirements of ASME PALD-2009 Part 7 Service Jacks and is identified by the government with National Stock Number 4910-00-289-7233.

2. APPLICABLE DOCUMENTS

2.1 General. The documents listed in this section are specified in sections 3, 4, or 5 of this DFP. This section does not include documents cited in other sections of this DFP or recommended for additional information or as examples. While every effort has been made to ensure the completeness of this list, document users are cautioned that they must meet all specified requirements of documents cited in sections 3, 4, and 5 of this standard, whether or not they are listed.

2.2 Government documents.

2.2.1 Specifications, standards, and handbooks. The following specifications, standards, and handbooks form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those cited in the solicitation or contract.

DEPARTMENT OF DEFENSE SPECIFICATIONS

MIL-DTL-17111 - Fluid, Power Transmission

DEPARTMENT OF DEFENSE STANDARDS

MIL-STD-889 - Dissimilar Metals

(Copies of these documents are available online at http://assist.daps.dla.mil/quicksearch/ or from the Standardization Document Order Desk, 700 Robbins Avenue, Building 4D, Philadelphia, PA 19111-5094.)

2.3 Non-Government publications. The following documents form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those cited in the solicitation or contract."

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

ANSI Z 535.4 - American National Standard for Product Safety Signs and Labels

(Copies of American National Standards can be purchased online at http://webstore.ansi.org/.)

AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME)

ASME PALD-2009 - Safety Standard for Portable Automotive Lifting Devices

(Copies of ASME documents can be obtained from ASME Headquarters, Three Park Avenue, New York, NY 10016-5990, phone (212) 591-7722, FAX (212) 591-7674 or on line at http://www.asme.org/ or http://www.asme.org/catalog/.)

2.4 Order of precedence. In the event of a conflict between the text of this DFP and the references cited herein, the text of this DFP shall take precedence. Nothing in this document, however, shall supersede applicable laws and regulations unless a specific exemption has been obtained.

3. REQUIREMENTS.

3.1 Product verification. One jack shall be subject to product verification in accordance with paragraph 4.2.

3.2 Completeness. All jacks shall be completely assembled and ready for use except as described below. The pump handles may be detached and packed in the same container as the jacks to reduce the volume of the shipping containers. Jack handles shall be packed in the same container with the jack to which it will be attached and shall not be packed separately.

3.3 Market acceptability. Offered jacks shall have been in production under the same basic design for the last 3 consecutive years and shall have been sold through a customary distributor network to professional automotive maintenance customers on a competitive basis with other manufacturer's jacks of similar design and intended market niche. Minor modifications required by

the Government for this procurement are not required to meet the 3 year market history time frame. The supplier to the Government shall demonstrate that the offered product is supported with adequate spare parts, commercial operation and maintenance manuals, and established repair facilities based in a broad geographic pattern for national and international support with experience at servicing and repairing the specific offered product.

3.4 Design. The jacks shall meet all of the requirements of the American Society of Mechanical Engineers Safety Standard for Portable Automotive Lifting Devices 2009 Part 7, (ASME PALD 2009, Part 7) entitled "Service Jacks" and all further requirements set forth in this DFP. ASME PALD 2009, Part 7 takes precedence over any conflict with the DFP.

3.5 Product requirements. The following product requirements are in addition to those that are required by ASME PALD 2009, Part 7.

3.5.1 Chassis length. The full length of the chassis shall be not less than 50 inches with handle upright.

3.5.2 Lifting distance. The 10-ton jack shall be capable of lifting the fully rated load from its lowest position, at no higher than 7 inches (the saddle must be able to slide under an object where the clearance is no more than 7 inches), to its highest position, at no lower than 21 inches.

3.5.3 Handle design. A “T” on the handle is required. The pump handle shall be no more than 54 inches long from the pivot point to the "T" on the end of the handle.

3.5.4 Force on handle. The 10-ton load shall be lifted from the lowest position to the highest position with no more than 180 pounds of force applied at the "T" on the handle.3.5.5 Hydraulic fluid. Only hydraulic fluids that produce no adverse effects on health and for which no special precautions are required beyond attention to good personal hygiene such as washing with soap and water shall be used. The fluid used in the jack shall be a general purpose hydraulic fluid of ISO Viscosity grade 32 with anti-wear, oxidation resistance, a pour point at or below –40°F and rust and corrosion protection. The hydraulic fluids and seals shall be compatible with each other. Fluids conforming to MIL-DTL-17111 will be acceptable as well. Aircraft grade fluids and fire retardant fluids are not required.

3.5.6 Hydraulic fluid labeling. The following message shall be applied in a permanent manner with large plain type near the filler plug(s) of the hydraulic fluid reservoir in such a position that it will be seen by anyone attempting to refill the reservoir. Fill in the name and type of hydraulic fluid that is used in the jack.

CAUTION
USE NO OTHER FLUID THAN
(Fill in your fluid identification here)

3.5.7 Overload bypass valve. The jack shall incorporate a hydraulically activated overload protection system which is separate in design and operation from the load release system, which is not externally adjustable by the user and which is located on the pump side of the hydraulic circuit such that it shall bypass hydraulic fluid from the pump to the reservoir when experiencing an

overload on the saddle. The valve shall be adjusted to operate at a load between 100% of the jack's rated load and 125% of the jack's rated load. It may be necessary to fill the reservoir with hydraulic fluid to set the bypass valve, in which case the fluid may remain sealed in the reservoir for shipment.

3.5.8 Load release system. The hydraulic unit shall incorporate a manually activated and controlled hydraulic release system to permit controlled lowering and complete stopping, at any position of the saddle, when the saddle is either fully loaded or completely unloaded, throughout the entire range of saddle travel. The load release system shall control the saddle's overall rate of descent to one foot per minute or slower throughout the full range of saddle travel, without stopping, while under full rated load. The release system shall be controlled at the "T" end of the handle.

3.5.9 Hydraulic over-travel bypass system. The hydraulic system shall incorporate a hydraulic fluid bypass to prevent over-travel of the lifting member after reaching its highest raised position. Unlimited buildup of hydraulic pressure, after reaching the point of highest rise, will not be acceptable.

3.6 Manuals and operating instructions. Two sets of commercial manuals and operating instructions shall be packed with each jack furnished. The manuals and instructions shall be written in English and shall be printed in a clean and legible manner. The manuals and operating instructions shall include safety, setup, operation, maintenance, and repair information, addresses of dealer/distributors that do repair work, and a list of replaceable parts with part numbers. The manuals and operating instructions may be in the manufacturer's format and shall include the following information on the front cover.

a. National Stock Number. 4910-00-289-7233.
b. The nomenclature of the jack: "Jack, Dolly Type, Hydraulic, Automotive Service, 10 Ton".
c. The contract number under which the jack was sold.
d. The manufacturer's name and CAGE CODE.
e. The suppliers name, address and CAGE CODE if different from the manufacturer.

Two copies of the appropriate Material Safety Data Sheets shall be provided with the manuals and operating instructions.

3.6.1 Copyright release. A copyright release for the manuals, operating instructions, and spare parts lists to the Government is requested. The manufacturer shall provide a letter to the Government's contracting officer stating whether a copyright release is being provided.

3.6.2 Electronic copies of manuals. The owner of the copyright shall provide an electronic copy of the manuals that are over-packed with the jacks on a CD, in .pdf format, to the contracting officer before the first shipment of the jacks.

3.7 Reclaimed materials. The manufacturer may use reclaimed materials for fabricating new parts. Reclaimed materials shall be reprocessed, remanufactured, or recycled in a manner that restores them to the same chemical composition and physical properties as the original materials

selected for use. Use of reclaimed parts as is or rebuilt from scrap or other used equipment is not permitted.

3.8 Dissimilar metals. Appropriate measures as recommended by MIL-STD-889 shall be taken to prevent galvanic corrosion.

3.9 Product markings. The jack shall be clearly marked with "10 TONS" placed in a clear and obvious position so that any operator will see it and understand it without difficulty.

3.9.1 Safety markings. Safety markings shall be placed on the jack and shall conform to the ANSI Z535.4, "Product Safety Signs and Labels". The markings shall include the following as required by ASME PALD 2009, Part 7:

a. Study, understand, and follow all instructions before operating this device.
b. Do not exceed rated capacity.
c. Use only on hard level surface.
d. Lifting device only. Immediately after lifting, support the vehicle with appropriate means.
e. Do not move or dolly the vehicle while on the jack.
f. Failure to heed these markings may result in personal injury and/or property damage.

3.9.2 Special markings. In addition to the product and safety markings the jack shall also be permanently marked with the following contract data:

a. Government contract number
b. Date of manufacture
c. Name and address of manufacturer
d. Point of Contact for warranty matters

4. VERIFICATION

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

a. Product verification (see 4.2).
b. Conformance inspection (see 4.3).

4.1.1 Responsibility for compliance. All delivered items shall meet all requirements of this DFP. The absence of any verification requirements shall not relieve the contractor of the responsibility of assuring that all products submitted to the government for acceptance comply with all requirements of the contract.

4.2 Product verification. Product verification inspection shall be performed on one complete jack. This inspection shall include the examination of 4.4 and the verification procedures of 4.5.

4.3 Conformance inspection. Conformance inspection shall include the examination of 4.4 and 4.5.3.

4.4 Examination. Each jack shall be examined for compliance with the requirements specified in 3.2 through 3.5. Any redesign or modification of the contractor's standard product to comply with specified requirements, or any necessary redesign or modification following failure to meet the specified requirements shall receive particular attention for adequacy and suitability. This element of inspection shall encompass all visual examinations and dimensional measurements. Noncompliance with any specified requirements or presence of one or more defects preventing or lessening operation at 100-125% of the max load shall constitute cause for rejection.

4.5 Verification procedures. Design proof testing and quality control of characteristics resulting from manufacturing processes are covered in ASME PALD 2009, Part 7. The manufacturer shall provide written certification to verify that programs to ensure the required performance and quality as specified in ASME PALD 2009, Part 7 and this Description for Purchase are in place in the manufacturing environment for the products delivered in accordance with this document. The Government reserves the right to perform any or all of the product verification procedures at any time and at any location it so chooses to assure continuous compliance with all requirements.

4.5.1 Product examination. Visually, dimensionally, and manually examine each jack. Visual examination shall include verification of completeness of manufacture and assembly, proper cleaning, and freedom from the identified defects. Dimensional examination includes measuring dimensions as specified and weighing the unit. Manual examinations shall include the operation of movable parts by hand to assure proper functioning. Failure of any sample jack to pass any examination shall result in the inspection of each jack of that lot for the failure. Jacks that fail any examination shall not be offered to the government for acceptance.

4.5.2 Verification of size. A random jack shall be selected from a month’s production or a group of 100 units, whichever is larger, and the following measurements shall be taken.

a. Chassis length - not less than 50 inches (see 3.5.1)
b. Lowest saddle position (height) - no higher than 7 inches (see 3.5.2)
c. Highest saddle position (height) - no lower than 21 inches (see 3.5.2)
d. Handle length - no more than 54 inches long (see 3.5.4)

4.5.3 Verification of features. The same jack shall be examined to determine the presence of the following features:

a. Verify that the jack is fully assembled, with its handle attached (see 3.1)
b. Verify that the handle has a “T” on the end of it (see 3.5.4)
c. Verify that the hydraulic fluid identification is permanently marked near the reservoir and identifies the proper fluid for refilling the jack. (see 3.5.6)
d. Verify that there is a manually activated load release system with control located at the “T” on the handle. (see 3.5.8)
e. Verify that two sets of the commercial manuals and operating instructions are packed with each jack and are written in English, printed in a clean and legible manner and include the following information: (see 3.6)

(1) safety information,

(2) the set up procedure,
(3) operating procedure,
(4) maintenance and repair information,
(5) the addresses of dealers or distributors authorized to perform repair work
(6) a list of replaceable parts with part numbers.
(7) verify that the following information is included on the front cover
(a) NSN 4910-00-289-7233
(b) Nomenclature: Jack, Dolly Type, Hydraulic, Automotive Service, 10 Ton
(c) The contract number
(d) The manufacturer's name and CAGE CODE
(e) The suppliers name, address and CAGE CODE if different from the manufacturer

f. Verify that two copies of the appropriate Material Safety Data Sheets are packed with each jack (see 3.5.5).

g. Verify that the hydraulic fluid used in the jack meets the requirements of paragraph 3.5.5 of this DFP. A Certificate of Conformance is acceptable for this requirement.

h. Verify that the rated capacity is marked on the jack. (see 3.9)

Failure of the jacks to have these features present shall be cause for rejection of the entire quantity of products offered for delivery.

4.5.4 Verification of product performance. The same jack shall be operated and/or tested as follows to verify the required performance.

4.5.4.1 Force on handle. The jack shall be operated to demonstrate the force applied to the handle in a downward direction to lift the rated load. The rated load shall be applied to the saddle and the load shall be lifted from the lowest position to the highest position with no more than 180 pounds of force applied to the handle. (See 3.5.3)

4.5.4.2 Overload bypass. The jack shall be operated to demonstrate the overload bypass valve. A load equal to the rated load of the jack shall be applied to the saddle and the load lifted. Another load equal to 125% of the rated load of the jack shall be applied to the saddle and the jack pumped to attempt to lift the load. The jack shall successfully lift the rated load and fail to lift the overload. The location of the overload bypass valve setting device shall be pointed out and the method of denying this setting feature to the soldier shall be explained. The location of the valve in the hydraulic circuitry shall be explained with the use of engineering drawings and/or hydraulic circuit diagrams. (see 3.5.7)

4.5.4.3 Load release. The jack shall be operated to demonstrate the load release system. The rated load shall be applied to the saddle and raised to its highest position. The release mechanism shall be operated to lower the load to its lowest position, stopping along the way to demonstrate the ability to halt the load at any desired point and retain the load in position without uncontrolled further lowering. The load shall be raised to its highest position again and the release mechanism operated to demonstrate controlled lowering throughout the entire lifting range. The load shall be lowered, using the release mechanism, at a rate no faster than 1 foot per minute with no stops along the way. (see 3.5.8)

4.5.4.4 Over-travel bypass. The jack shall be operated to demonstrate the hydraulic over-travel bypass system. The jacks lifting arm shall be pumped as high as it can travel and pumping shall continue. The hydraulic fluid bypass valve shall automatically act to prevent unlimited buildup of hydraulic pressure, after reaching the point of highest rise. (See 3.5.9)

4.5.4.5 Conformance to ASME PALD 2009, Part 7. The jack shall be subjected to testing to verify the jack's conformance to all of the ASME PALD 2009, Part 7 safety requirements, including the ability to lift and retain the load without bending or failure. A report shall be submitted to the contracting officer clearly indicating the test results to all of the ASME PALD 2009, Part 7 safety requirements before any shipment of products to the government will be authorized. Failure of the tested jack to meet these performance requirements shall be cause for rejection of the entire quantity of products offered for delivery. Further verification shall not be performed upon product that did not pass this verification of performance requirements. (see 3.2)

4.5.5 Verification of packaging performance. The packaging shall be verified to the performance criteria in Section D, Packaging and Marking.

4.6 Changes to materials, processes, or configuration. The contracting officer shall be informed of any changes to the materials, processes, configuration or other characteristic of the jacks. The contracting officer shall determine if the reported changes will require any or all of the verifications of paragraph 4.2 to be repeated.

4.7 Conformance of subsequent production quantity. All products offered for acceptance throughout the life of the contract shall conform to all of the requirements of the DFP. The Government reserves the right to re-verify conformance with requirements, at its own facility and at its own expense, at any time during the life of the contract and return to the contractor for warranty replacement such product that does not conform to the specified requirements.

4.8 Inspection of packaging. The preservation, packing and markings shall be examined to determine compliance with Section D, Packaging and Marking.

4.9 Verification of market place acceptability. The contractor shall provide clear and convincing evidence that the jack offered for acceptance meets the market acceptability requirement of paragraph 3.3, above. Such evidence shall be in the form of commercial catalogs offering the product for sale for at least the last 3 consecutive years, or sales transaction records indicating that the product has had more sales to the professional automotive service market than the Government and the consumer markets in the last three years.

5. PRESERVATION, PACKING AND PACKAGING

5.1 Packaging. Preservation, packing and packaging shall be as specified in Section D, Packaging and Marking.

6. NOTES

(This section contains information of a general or explanatory nature that may be helpful. There are no mandatory requirements in this section.)

6.1 Intended use. The 10 ton dolly jack is primarily intended for use by personnel engaged in the maintenance and repair of US Army tactical and combat vehicle systems.

HISTORY OF CHANGES

Initial Release: 17 June 2010

1. DFP 578 is derived from DFP 391. DFP 391 covered the 4 ton and 10 ton sizes of jack. The requirement from TACOM was for a DFP that had only the 10 ton size in it. The 4 ton jack will be written into its own DFP for future use.

Rev A: 21 SEP 2011

2. Entire document reformatted to comply with military style manuals.
3. Section 5, Packaging, updated to current standards.
4. Para 4.2.3, added subparagraph g for hydraulic fluid conformance verification.
5. Added para 3.4.2, Electronic copies of manuals.
6. Para 3.3.5, removed references to brand name hydraulic fluids.
7. Removed image of the jack from the cover sheet.
8. Corrected references to standards and specifications in para 2 to match those called out in changes to sections 3, 4 and 5.

Rev B: 12 December 2012
Document reformatted
Section 5 removed.
Section 4 revised
Section 3 revised