



ANNEX B

PURCHASE DESCRIPTION

FOR

Aircraft Tripod Jack Trailer

ECC 160501

NOTICE



This documentation has been reviewed by the Technical Authority and does not contain controlled goods.

AVIS

Cette documentation a été révisée par l'Autorité technique et ne contient pas de marchandises contrôlées.

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1. SCOPE

1.1 Scope

- a) This document describes the requirements for a flatbed trailer designed to transport three (3) 1,100 kg Boeing C-17 Globemaster tripod jacks. The trailer will have a low angle ramp and a manual winch system.

1.2 Instructions

- a) Requirements, which are identified by the word “must”, are mandatory. Deviations will not be permitted.
- b) Requirements identified with a “will” define actions to be performed by Canada and require no action/obligation on the Contractor’s part.
- c) Where “**must**” or “will” are not used, the information supplied is for guidance only.
- d) In this document “provided” **must** mean “provided and installed”.
- e) Where a technical certification is referred to in this specification, a copy of the certification or an acceptable Equivalent **must** be supplied for the vehicle when requested by the Technical Authority.
- f) Metric measurements are used to define the requirement. Other measurements are for reference only and may not be exact conversions.
- g) Nominal dimensions reflect a method by which materials or products are generally identified, but which differ from the actual measured dimensions.

1.3 Definitions

- a) “**Technical Authority**” - The government official responsible for technical content of this requirement.
- b) “**Equivalent**” - Substitutes and alternatives that are equivalent in product, performance or a standard will be considered for acceptance by the Technical Authority where Proof of Compliance for equivalency for the respective requirement is provided for evaluation.
- c) “**Trailer**” – The entire trailer including all systems and sub-systems, in a complete manufactured state in accordance with the requirements in this Purchase Description.
- d) “**5th percentile adult female**” – As defined in the *Motor Vehicle Safety Regulations (C.R.C., c. 1038)* a person having as physical characteristics a mass of 46.3 kg, height of 1499 mm, erect sitting height of 785 mm, normal sitting height of 752 mm, hip sitting breadth of 325 mm, hip sitting circumference of 925 mm, waist sitting circumference of 599 mm, chest depth of 191 mm, bust circumference of 775 mm, chest upper circumference of 757 mm, chest lower circumference of 676 mm, knee height of 455 mm, popliteal height of 356 mm, elbow rest height of 180 mm, thigh clearance height of 104 mm, buttock-to-knee length of 518 mm, buttock-to-poples length of 432 mm, elbow-to-elbow breadth of 312 mm and seat breadth of 312 mm.
- e) “**95th percentile adult male**” – As defined in the *Motor Vehicle Safety Regulations (C.R.C., c. 1038)* a person having as physical characteristics a mass of 97.5 kg, height of 1849 mm, erect sitting height of 965 mm, normal sitting height of 930 mm, hip sitting breadth of 419 mm, hip sitting circumference of 1199 mm, waist sitting circumference of 1080 mm, chest depth of 267

mm, chest circumference of 1130 mm, knee height of 594 mm, popliteal height of 490 mm, elbow rest height of 295 mm, thigh clearance height of 175 mm, buttock-to-knee length of 640 mm, buttock-to-poples length of 549 mm, elbow-to-elbow breadth of 506 mm and seat breadth of 404 mm.

- f) **“Gross Axle Weight Rating (GAWR)”** - The value specified by the vehicle manufacturer as the load-carrying capacity of a single axle system, as measured at the tire-ground interfaces.
- g) **“Gross Vehicle Weight Rating (GVWR)”** - The value specified by the vehicle manufacturer as the loaded weight of a single vehicle.
- h) **“Payload”** means the maximum cargo load carrying capacity of the trailer. The payload is the calculated difference between the Curb Weight and the Gross Vehicle Weight Rating

2. APPLICABLE DOCUMENTS

2.1 Applicable Documents

- a) The following documents form part of this Purchase Description. The dates of issue are those in effect on the date of release of the RFP. Canada will not be supplying these documents. Sources are a shown:

Hazardous Products Act

Government of Canada / Department of Justice
<http://laws-lois.justice.gc.ca/eng/acts/H-3/>

SAE Standards

SAE World Headquarters
400 Commonwealth Dr.,
Warrendale, PA, 15096-0001
<http://www.sae.org>

Canadian Occupational Health and Safety Regulations (COHSR), 2015

<http://laws.justice.gc.ca/eng/regulations/sor-86-304/index.html>

3. REQUIREMENTS

3.1 Standard Design

- a) **Latest Model** - The vehicle design **must** be the manufacturer's latest model.
- b) **Industry Acceptability** - The trailer design **must** have demonstrated industry acceptability by having been manufactured and sold commercially for at least 2 year, or be manufactured by a company that has at least 5 years' experience in design and manufacturing of a comparable type of equipment of equivalent or greater complexity.
- c) **Engineering Certification** - Original manufacturers engineering certification **must** be provided upon request for major drive train components, and major equipment systems and assemblies, to demonstrate that assemblies are used within their design limitations.
- d) **Regulations** – The trailer **must** conform to all applicable laws, regulations and industrial standards governing manufacture, safety, noise levels and pollution in effect in Canada at the time of manufacture. International equivalent laws, regulations, and industrial standards will be accepted only if certified for equivalency by a professional engineer.

- e) **Published Ratings** - The trailer **must** have system and component capacities equivalent to published ratings (i.e. product or component brochures).
- f) **Standard Components** - The trailer **must** include all standard components, equipment and accessories for the model offered, although they may not be specifically described in this Purchase Description.
- g) **Spare Parts** - The manufacturer **must** select components readily available for a minimum period of ten (10) years from the date of manufacture.
- h) **Hazardous Materials** - The contractor **must** comply with Hazardous Products Act of Canada concerning the use of hazardous materials, ozone depleting substances, polychlorinated biphenyls, asbestos and heavy metals used in the manufacture and assembly of the product supplied.

3.2 Operating Conditions

3.2.1 Weather

- a) The trailer must operate under the extremes of weather conditions found in Canada in temperatures ranging from -40 to 37° C (-40 to 99° F).

3.2.2 Terrain

- a) The trailer **must** be operable on concrete and asphalt surfaces that include year round operations on rain, snow, hard packed snow and ice with up to 5.0% (percent) slope in all weather conditions.

3.3 Human Factors Engineering

- a) The trailer **must** comply with the relevant sections of the COHSR.
- b) The trailer **must** be designed for safety and ease of use by CAF users with anthropometric characteristic measurements ranging from 95th percentile male to 5th percentile female.
- c) The trailer **must** be equipped, with warning and instruction plates, non-slip walking surfaces and grab handles for safe use to accommodate CAF users with anthropometric characteristic measurements ranging from 95th percentile male to 5th percentile female.

3.4 Performance

- a) The trailer **must** operate when carrying a payload of 3,175 kg (7,000lbs).
- b) The trailer **must** be designed to carry and transport three (3) tripod jacks at the same time.
- c) The tripod jacks have the following information: NSN# 1730-00-997-7130, Make and model: Columbus 8261-010.
- d) Each tripod jack weighs 1,043 kg (2,300lbs) and has a diameter x height of 2,286 mm x 1,829 mm (90 inches x 72 inches).
- e) The trailer **must** be towed with a full payload on airfield runways at sustained speeds of a 25 km/h (15.5 mph) minimum.
- f) The trailer **must** follow the towing vehicle without weaving or side sway.

- g) The trailer **must** provide horizontal articulation up to 60 degrees without interference with the towing vehicle.
- h) The trailer **must** be designed for use by one (1) operator.

3.5 Tripod Winch

- a) The trailer **must** be supplied with a rear facing manual winch mounted at the front of the trailer above the drawbar.
- b) The winch **must** pull a minimum weight of 1,200kg (2,640lbs).
- c) The winch cable **must** be provided with a hook and latch at the free end.
- d) The winch cable **must** have a minimum length of 15m (50 ft).

3.6 Tongue Support

- a) The trailer tongue **must** be provided with a support for the tongue that will lift and support a trailer loaded to the payload specification defined in the performance requirements in Paragraph 3.4.
- b) The tongue support **must** stow or swing away when the trailer is being towed.

3.7 Trailer Deck

- a) The trailer deck **must** be topped with a diamond plated floor made of a corrosion resistant material.
- b) The trailer deck **must** be provided with a minimum of nine (9) pan fitting tie down points evenly spaced, where two (2) of the points will be used to secure one (1) tripod jack.
- c) The tie down points **must** be compatible with the aircraft tie down cargo strap with NSN 1670-00-725-1437 and military spec CGU1/B.
- d) The trailer **must** have a maximum slope of 4°.
- e) If a ramp is provide, the ramp **must** be lockable in the stowed position.
- f) If a ramp is provided, it **must** be spring assisted for use in accordance with Paragraph 3.3.
- g) If a ramp is provided, the ramp **must** support a minimum weight of 1,200kg (2,640lbs).
- h) A trailer with a beavertail design will not be accepted.

3.8 Braking System

- a) The trailer **must** be equipped with surge brakes that operate in the the conditions specified in Paragraphs 3.2 and **Error! Reference source not found..**
- b) The trailer brakes **must** operate independently of the prime mover and allow the trailer to back-up without any restriction.

3.9 Wheels, Rims and Tires

- a) The tires **must** have tire manufacturer certification that tires and rims provided are suitable and adequately sized for this application.

- b) Tire size and ply ratings **must** comply with Tire and Rim Association Standards.
- c) The wheel assembly **must** have sufficient load capacity so the trailer loaded to rated capacity and provided with all options does not exceed the manufacture's load ratings.
- d) Tire pressure **must** be marked near the tire location.
- e) The tires **must** be tubeless radial tires with all-weather treads.
- f) The trailer **must** be provided with a spare wheel assembly mounted on the trailer and ready for service, of same size and ply rating as tires furnished with trailer.
- g) The Technical Authority **must** approve the proposed spare tire mounting location.

3.10 Hitch and Safety Chains

- a) The trailer **must** be provided with a pintle lunette hitch.
- b) The lunette **must** be rated to tow the trailer at full payload capacity.
- c) The lunette **must** have an inner diameter of 76mm (3 in).
- d) The lunette **must** have a minimum 304mm (12 in) of vertical adjustment.
- e) The trailer **must** be provided with two (2) safety chains with snap hooks.

3.11 Accessories

- a) The trailer **must** be provided with a rear mounted license plate holder.
- b) A set of wheel chocks **must** be provided for each side with on-board storage.
- c) A lockable, weathertight toolbox **must** be provided mounted on the trailer tongue.
- d) The toolbox **must** be 0.6 m (2 ft) x 0.6 m (2 ft) x 0.6 m (2 ft) at a minimum.
- e) Hard rubber or polyethylene pads **must** be provide along the full interior perimeter of the trailer to protect equipment during loading and transport.

3.12 Lubricants

- a) Synthetic non-proprietary lubricants **must** be provided.

3.13 Paint

- a) The trailer **must** be painted Dupont Axalta 750206 E B Penn Dot Yellow or equivalent.

3.14 Retroreflective Tape

- a) Retroreflective tape **must** be placed along the front, rear and sides of the trailer.

3.15 Corrosion Protection

- b) The trailer **must** be designed and manufactured to prevent galvanic corrosion.

- c) The materials used in the vehicle manufacturing **must** resist damage or deterioration as a result of cleaning with hot or cold water, steam, or detergents.

3.16 Identification

- a) The trailer identification information **must** be permanently marked in a conspicuous and protected location.
- b) Identification information must include manufacturer's name, model and serial number.
- c) The trailer capacity rating **must** be marked on the drawbar.

3.17 Labels

- a) All identification, instructional, and warning labels **must** be bilingual or International symbols defined in SAE J1362.
- b) All identification, instructional, and warning labels **must** within view of the operator.

4. INTEGRATED LOGISTIC SUPPORT

Trailer Manuals

- a) All manuals required for the description, operation, maintenance and repair of the complete equipment, including sub-systems, **must** be provided.

4.1.1 Operator's Manuals

- a) The operator's manuals **must** be bilingual (English/French).
- b) The operator's manuals **must** include instructions for the safe operation of the trailer.
- c) The operator's manuals **must** include daily operator maintenance instructions/checks (including lubrication).
- d) The operator's manuals **must** include safety warnings.
- e) The operator's manuals **must** include hand signals (as necessary).

4.1.2 Parts Manual(s)

- a) The parts manual(s) **must** be in English (bilingual is desirable).
- b) The parts manual **must** have illustrations showing all components of the trailer including equipment and accessories from other manufacturers that are supplied to meet the requirements of the contract, with numbers for the itemization of the parts.
- c) The parts manual **must** have a listing for all itemized parts showing the Original Equipment Manufacturers (OEM) part number, the part name and a brief description of the item.
- d) The parts manual **must** cross reference the OEM part number to the correct illustration and item number.
- e) The parts manual **must** have a representation of bilingual warning signs and identification labels delivered on the equipment.

4.1.3 **Maintenance Manuals**

- a) The maintenance manual **must** be bilingual.
- b) The maintenance manual **must** include a trouble shooting guide, showing the steps and tests required to determine the exact cause of a problem and an explanation of the steps required to correct a problem.
- c) The maintenance manual **must** include a listing of the necessary tolerances, torque levels, fluid volume, and special tools (including item part numbers).
- d) The maintenance manual **must** include information on the order of disassembly and assembly of the systems and components of the trailer.
- e) The maintenance manual **must** include special tools list as per Paragraph 4.1.4.

4.1.4 **Manual Delivery to Technical Authority**

- a) Sample manuals **must** be submitted to the Technical Authority (TA) prior to the delivery of the trailer for each model and or sub-system for approval. Sample manuals will not be returned. TA will provide approval or comments on the manuals within 30 days.
- b) One (1) complete set of approved manuals (Operator's, Maintenance, and Parts) in electronic format **must** be delivered to the Technical Authority.

4.1.5 **Manual Delivery with Trailer**

- a) One (1) complete set of manuals (Operator's, Maintenance, and Parts) **must** accompany each trailer, shipped to each location.
- b) The manuals **must** be in paper and electronic format.

4.1.6 **Electronic Format**

- a) Approved copies of the electronic format manuals **must** be delivered on CD/DVD-ROM.
- b) CD/DVD-ROM **must not** require installation, password and/or Internet connection to be accessed and be an unlocked PDF in a searchable format.

4.1.7 **Provisional Manuals**

- a) In the event that approved manuals are not available at the time of delivery of the equipment, manuals marked "Provisional" **must** be supplied with the equipment.
- b) The contractor **must** deliver replacement approved manuals to all destinations where Provisional manuals were delivered.

4.1.8 **Manual Supplements**

- a) The contractor **must** supply manual supplements (Operator's, Maintenance and Parts) to support dealer-installed equipment not covered in the Trailer Manuals.
- b) Manual supplements **must** be delivered in accordance with 4.1.4 and 4.1.5.

4.1.9 **Translation and Reproduction Rights**

- a) The Canadian Government **must** reserve the right to translate and reproduce, for Government use only, all or any part of the publications supplied, including the training packages delivered against the contract agreement.

4.1.10 **Changes to Manuals**

- a) During the period of the contract, changes to equipment, which affect the contents of manuals, **must** be reflected in the revision of the electronic and paper version of the manuals.
- b) Changes to the manuals **must** conform to the same format and presentation requirements as the original manuals.
- c) The revised electronic version of the manual **must** be sent to the Technical Authority by the Contractor.

4.2 **Warranty Letter**

- a) The warranty letter **must** include a list of all Canadian designated warranty service providers that will honour the warranty for the equipment and attachments (if applicable) procured under this contract, including the contact person and phone number at each warranty service provider.
- b) The warranty letter **must** include additional warranty coverage of sub-systems and a copy of the warranty letter from each sub-system's Original Equipment Manufacturer (OEM).
- c) The warranty letter **must** include warranty period as negotiated in the contract.
- d) The warranty letter **must** include Contractor contact information, name and phone number, for warranty support.

4.1.1 **Warranty Letter Delivery**

- a) The Contractor **must** provide a bilingual warranty letter to the Technical Authority and with each trailer. If the Technical Authority requires the letter to be in DND format, then they will provide the Contractor a template for the DND acceptable format of the warranty letter.

4.2 Other ILS Deliverables to Technical Authority The following deliverables **must** be provided in electronic format prior to the delivery of the last trailer.

4.3.1 **Data Summary**

- a) The Contractor **must** provide a bilingual Data Summary for each make/model/configuration of trailer by completing Technical Authority's template with data and a trailer picture.

4.1.2 **Photographs**

- a) The Contractor **must** provide photographs in colour, taken against a plain background, and in digital JPEG format with a minimum 10 megapixel resolution.
- b) One left front three-quarter view of a completed unit and one right rear three-quarter view of a completed unit **must** be provided

4.1.3 **Dimensioned Drawing**

- c) One side and front view sketch showing the dimensions **must** be provided. Brochure sketches are acceptable.

4.1.4 **Special Tools List** - The Contractor **must** provide an itemized list of specific special tools required for the servicing and repair of the vehicle and include:

- d) Item name;
- e) Contractor's part number;
- f) Manufacturer's part number (OEM);
- g) Quantity recommended per delivery location;
- h) Unit price; and
- i) Unit of issue.

4.1.5 **Recommended Spare Parts List** – The Contractor **must** provide a list detailing the spare parts deemed necessary to maintain the trailer for a period of 12 months exclusive of any warranty period, and include:

- a) Part description;
- b) Original Equipment Manufacturer;
- c) Original Equipment Manufacturer Part Number;
- d) Suggested quantity; and
- e) Unit cost.

4.3 **Safety Recalls and Servicing Data**

- a) Safety recalls, and manufacturer's technical service bulletins, or equivalent **must** be provided to the technical authority and the final delivery locations on a continuing basis, throughout the life expectancy of the trailer or for no less than 10 years.

4.4 **Familiarization Training**

- a) The Contractor **must** perform at least 1-day (8 hours) familiarization instruction at each destination, for a maximum of 8 personnel (at each destination).
- b) The instruction **must** include the detailed operation and normal servicing of the trailer and will be attended by CAF operators and maintainers.
- c) Familiarization instructions **must** be available in both official languages for destinations in the province of Quebec or as requested by the Technical Authority.
- d) The final dates **must** be arranged with the Technical Authority.
- e) After completion of the familiarization session, the Contractor **must** have a “**PROOF OF FAMILIARIZATION INSTRUCTION**” certificate signed by the consignee. The Technical Authority will supply this document in an electronic format, when requested.