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11 Laurier St. / 11, rue Laurier
Place du Portage, Phase III
Core 0A1 / Noyau 0A1
Gatineau, Québec K1A 0S5
Bid Fax: (819) 997-9776

SOLICITATION AMENDMENT
MODIFICATION DE L'INVITATION

The referenced document is hereby revised; unless otherwise indicated, all other terms and conditions of the Solicitation remain the same.

Ce document est par la présente révisé; sauf indication contraire, les modalités de l'invitation demeurent les mêmes.

Comments - Commentaires

Vendor/Firm Name and Address
Raison sociale et adresse du
fournisseur/de l'entrepreneur

Issuing Office - Bureau de distribution
Vehicles & Industrial Products Division
11 Laurier St./11, rue Laurier
7A2, Place du Portage, Phase III
Gatineau, Québec K1A 0S5

Title - Sujet Semi-Trailer, Lowbed	
Solicitation No. - N° de l'invitation W8476-155171/A	Amendment No. - N° modif. 002
Client Reference No. - N° de référence du client W8476-155171	Date 2014-12-10
GETS Reference No. - N° de référence de SEAG PW-\$\$HP-539-66000	
File No. - N° de dossier hp539.W8476-155171	CCC No./N° CCC - FMS No./N° VME
Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2015-01-13	
Time Zone Fuseau horaire Eastern Standard Time EST	
F.O.B. - F.A.B. Specified Herein - Précisé dans les présentes	
Plant-Usine: <input type="checkbox"/> Destination: <input type="checkbox"/> Other-Autre: <input checked="" type="checkbox"/>	
Address Enquiries to: - Adresser toutes questions à: Cafferty, Kathy	Buyer Id - Id de l'acheteur hp539
Telephone No. - N° de téléphone (819) 956-5917 ()	FAX No. - N° de FAX () -
Destination - of Goods, Services, and Construction: Destination - des biens, services et construction:	

Instructions: See Herein

Instructions: Voir aux présentes

Delivery Required - Livraison exigée	Delivery Offered - Livraison proposée
Vendor/Firm Name and Address Raison sociale et adresse du fournisseur/de l'entrepreneur	
Telephone No. - N° de téléphone Facsimile No. - N° de télécopieur	
Name and title of person authorized to sign on behalf of Vendor/Firm (type or print) Nom et titre de la personne autorisée à signer au nom du fournisseur/ de l'entrepreneur (taper ou écrire en caractères d'imprimerie)	
Signature	Date

Solicitation No. - N° de l'invitation

W8476-155171/A

Amd. No. - N° de la modif.

002

Buyer ID - Id de l'acheteur

hp539

Client Ref. No. - N° de réf. du client

W8476-155171

File No. - N° du dossier

hp539W8476-155171

CCC No./N° CCC - FMS No/ N° VME

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1. This Amendment 002 is raised to:

- a. answer questions on this solicitation;
- b. provide an updated Annex "B" – Purchase Description- Multi-Axle Lowbed Combination Semi-Trailer dated 8 December 2014; and
- c. extend the closing date from 02:00 pm on 19 December 2014 to 02:00 pm on 13 January 2015 Eastern Standard Time.

2. The following answers are provided in response to bidders' questions:

Q1. Page 5 of 15... 3.6.8 requests landing gear is this correct? We have not installed landing gear on a removable gooseneck lowbed.

A1. Landing gear is only required on the Jeep.

Q2. Page 5 & 6 of 15... 3.7.1 requests 38" deck height but does not mention ground clearance.. does 24" deck height with 7" of ground clearance work?

A2. Yes that is acceptable. The main deck height shall not exceed 965 mm.

Q3. I am assuming that the Max Gross weight is the actual weight of the machines in Appendix A, Scenario 1, 2 and 3?

If I am correct on the Max Gross weight, for legal HTA Loads these trailers will require a 2 axle Jeep dolly and probably 4 or more axles on the trailer.

A3. Yes the max gross weight is the weight of the vehicle. The MLC (Military Load Classification) is required for bridge classification to safely allow the vehicle to cross the bridge.

It is possible that each of the system components can have numerous axles.

Q4. Could the Annex B purchase description provide more information on the amount of axles they actually require on the trailers or are they leaving it up to the manufacturer?

A4. It is up to the manufacturer to build a safe and reliable trailer system that will comply with the Highway Traffic Act for a multiple axle configurations.

Q5. What weight should we take into consideration for the construction of the semi-trailer, registered under the "MLC" (what is the definition of MLC) or registered under the "maximum gross weight"?

A5. The MLC stand for Military Load Classification. It is used to classify bridges at to the weights that they can withhold as the vehicle crosses it. Take into consideration the Maximum Gross Weight for the trailer construction.

- Q6. Annex B, 3.4 (d): Is there a requirement that the trailer meet all Provincial and Territorial legislated requirements such as tire and axle loads, bridge weight limits etc? It should be noted that being able to operate could otherwise be interpreted as not also requiring the trailer to be “street legal”.
- A6. Proper spacing of the axle groupings have to be met. When this trailer is loaded with one of these vehicles, permits will be drawn (if necessary) in order to transport from one place to another.
- Q7. Annex B, 3.5.1: Please specifically state the maximum payload to be carried. Annex A would otherwise require interpretation by the bidder since Max Gross Weight could include personnel, ammunition, personal kit etc which may not be on the trailer while in transit. Also the reference to MLC does not constitute an actual tare weight of the payload, but is simply a class rating.
- A7. Use the Maximum Gross Weight of the vehicles.
- Q8. Annex B, 3.6.3: Please define what is meant by “common axles”, does this mean all axles must be the same; or commercially available etc?
- A8. Every axle in the system shall be the same make/model and commercially available.
- Q9. Annex B, 3.7.2.1(a): Is a diesel powered engine a mandatory requirement?
- A9. No.
- Q10. Annex B, 3.7.3.3.3: Please specify the maximum acceptable weight on the vehicle fifth wheel?
- A10. For calculations use a Tridem axle tractor and have the maximum acceptable weight on the fifth wheel be governed by the heavy haul overweight guidelines.
- Q11. Annex B, 3.7.3.3.3: Please specify the make and model of tractors anticipated to be used with these trailers?
- A11. At this time we do not have a tractor to pull this system complete with a load safely. One will be purchased once the trailer is procured and most likely be a tridem axle tractor.

Q12. Annex B, 3.8.2 (a): Please advise if the paint system shall be CARC?

A12. No it will not be CARC.

Q13. Annex B, 3.11 (a) ii and iii: How will the desirable requirement be rated in the price evaluation in the event that the bidder offers bilingual manuals?

A13. For the parts and maintenance manuals shall be in English. If the bidder wishes to have them translated then that will be a bonus to DND and will be at the cost of the bidder. There is no rating for the manuals as this solicitation is a lowest cost bid that wins.

Q14. Annex B, 3.11 (f): Please provide the location where the familiarization training shall be conducted?

A14. Familiarization training for firm quantities of trailers must be conducted at the destinations identified in Annex "A" - Pricing. Familiarization training for optional quantities of trailers must be quoted in accordance with RFP, Part 6, Paragraph 5.1, Basis of Payment Type 2. If familiarization training is exercised for the optional trailers, the Contractor will be advised where to conduct the training and will be provided additional travel and living expenses under Item 006 of Annex "A"- Pricing.

Q15. 3.4 Operating Conditions, Item D "The system shall operate in all Canadian Provinces and Territories."

As there is no highway system to Nunavut, will the Customer remove the requirement for the system to be operated in Nunavut?

A15. These trailer systems will only be used on established road networks.

Q16. 3.4 Operating Conditions, Item D "The system shall operate in all Canadian Provinces and Territories."

When laden with the maximum required payload, does the Customer require the trailer system to conform to the maximum permissible axle weight restrictions in all provinces and territories, as legislated by provincial and territorial highway traffic acts?

A16. Yes, the trailer system should conform to the highway axle weight restriction. Given that when the trailer is loaded with a vehicle from Appendix A that the heavy haul overweight guidelines should be followed. When transporting these vehicles proper permits will be drawn by the user under their provincial regulations.

Q17. 3.5.1 Capacity, “The system shall be capable of safely transporting all payloads defined in Appendix A”

With respect to each of the three payload scenarios, what is the definition of “MLC”?

A17. The Military Load Classification (MLC) is a system of standards used by NATO to classify the safe amount of load a surface can withstand. Load-carrying capacity is shown in whole numbers for vehicles, bridges, roads, and routes. For example, if the vehicle was to travel over a bridge at its Gross Maximum weight X, then the bridge has to have a MLC of amount Y to safely accommodate the vehicle in transit.

Q18. 3.5.1 Capacity, “The system shall be capable of safely transporting all payloads defined in Appendix A”

Is the MLC the maximum weight of the payload?

A18. No, the maximum weight of the payload is the Gross Weight.

Q19. Appendix A, Scenario 3 shows the Leo2 A4 Can at 80000 kgs MLC, but the maximum gross weight indicated is 62000 kgs. If we knew the weight of the heaviest tank (62000 kgs or is it 80000 kgs?), it would greatly simplify our task of creating a response.

A19. The MLC stand for Military Load Classification. It is used to classify bridges at to the weights that they can withhold as the vehicle crosses it. Take into consideration the Maximum Gross Weight for the trailer construction. The heaviest tank in stated in Appendix A is 69 500 kg.

3. All references to Annex “B” - Purchase Description - Multi-Axle Lowbed Combination Semi-Trailer dated 27 October 2014 throughout the solicitation must be amended to read Annex “B” Purchase Description - Multi-Axle Lowbed Combination Semi-Trailer dated 8 December 2014.

ALL OTHER TERMS AND CONDITIONS REMAIN UNCHANGED.



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.

8 December 2014

ANNEX "B"

PURCHASE DESCRIPTION

FOR

MULTI AXLE LOWBED COMBINATION SEMI-TRAILER

1.0 **BACKGROUND**

1.1 **Scope.** This document covers the requirement for a multi axle lowbed combination semi-trailer. The trailer system will be used to transport heavy armoured vehicles.

1.2 **Instructions.** The following instructions **shall** be applied to this Purchase Description:

- (a) Requirements, which are identified by the word "**shall**", are mandatory. Deviations will not be permitted.
- (b) Requirements identified by "**shall**^(E)", are mandatory. However, the Technical Authority will consider alternatives for acceptance as a Technical Authority Approved Equivalent. "Technical Authority Approved Equivalent" is defined as an alternative standard, design, feature, or component that is evaluated by the Technical Authority and determined to meet the specified requirements for equivalent standard, form, fit, function and performance as applicable.
- (c) Requirements identified with a "will" define actions to be performed by the Crown and require no action/obligation on the Contractor's part.
- (d) Where "**shall**", "**shall**^(E)", or "will" are not used, the information provided is for guidance only.
- (e) In this document "provided" **shall** mean, "provided and installed".

- (f) Where a standard is specified and the Contractor has offered an equivalent, that equivalent standard **shall** be supplied by the Contractor, upon request.
- (g) Where certification is required, the Contractor **shall** provide the certification or acceptable proof of compliance, upon request.
- (h) Metric measurements **shall** be used as defining the requirement. Other measurements are reference only and may not be exact conversions.
- (i) Dimensions stated as nominal **shall** be treated as approximate dimensions. Nominal dimensions reflect a method by which materials or products are generally identified for sale commercially, but which differ from the actual dimensions.

1.3 Definitions. The following definitions **shall** be applied to the interpretation of this Purchase Description:

- (a) “Technical Authority” (TA) is the government official responsible for technical management of this requirement. The Technical Authority is the Director Support Vehicles Program Management.
- (b) “System” is defined as the multi axle lowbed combination that may include: jeep, lowbed & booster. The system is specified in this Purchase Description.

2.0 APPLICABLE DOCUMENTS

2.1 Government Furnished Documents. NOT APPLICABLE

2.2 Other Publications. The following documents form part of this Purchase Description. Web sites for the organization are given when available. Effective documents are those in effect on date of manufacture. Sources are as shown:

- (a) Canadian Motor Vehicle Safety Standards (CMVSS)
- (b) Society of Automotive Engineers SAE Handbook

3.0 REQUIREMENTS

3.1 Standard Design

- (a) The system **shall** be the manufacturer's latest model having demonstrated industry acceptability by having been manufactured and sold commercially for at least 5 years, or, **shall** 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.

- (b) The system **shall** have engineering certification available, upon demand, for this application from the original manufacturers of major equipment systems and assemblies.
 - (c) The system **shall** 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.
 - (d) The vehicle **shall** operate in accordance with all original equipment manufactures' (OEM) rated capacities and performance specifications.
- 3.2 Safety Standards.** The system **shall** meet the provisions of the Canada Motor Vehicle Safety Act in effect on the date of manufacture of the system.
- 3.3 Maintainability.** All maintenance and repair tasks, especially routine operator maintenance, **shall** be easy to perform with a minimum of special tools and skills.
- 3.4 Operating Conditions.** The system, under all load conditions, **shall** operate safely and efficiently as follows without degradation in performance, reliability and maintainability:
- (a) The system **shall** operate on paved roads, gravel roads and dirt roads with severe washboard and pot holes.
 - (b) The system **shall** operate in the temperature range of -40°C to 37°C.
 - (c) The system **shall** operate with the payloads defined in Appendix A under all operating conditions.
 - (d) The system **shall** operate in Canadian Provinces and Territories where there are established road networks.
- 3.5 Trailer System.** The trailer is referred to as a system. The system may consist of a jeep, trailer and booster or any combination thereof to carry the loads specified in Appendix A.
- 3.5.1 Capacity.** The system **shall** be capable of safely transporting all payloads defined in Appendix A.
- 3.5.2 Gross Axle Weight Rating (GAWR).** The GAWR for each axle of the system **shall** be supplied by the manufacturer. The GAWR **shall** be demonstrated as a system for all load cases defined in Appendix A. All components of the axle system including; axle, brakes, tires, rims and suspension **shall** not exceed manufactures rated capacities of the individual components.
- 3.6 Common System Components**

3.6.1 Dimensions. The following applies:

- (a) The common system components **shall** have a suitable width to be used on Canadian highways;
- (b) Each kingpin installed on the system **shall** have a nominal variable height of 1,219 to 1,397 mm; and
- (c) System components **shall** have swing clearances suitable for tandem and tri-axle tractors.

3.6.2 Brakes. The system **shall** be equipped with an anti-lock air disc brake system. The brake system **shall** be equipped as follows:

- (a) The system **shall** be equipped with remote cable operated drain valves.
- (b) The system **shall** be equipped with colour coded glad hand couplers with dummy glad hand couplers including a safety chain for each glad hand.

3.6.3 Axles. The system **shall** be equipped with common axles appropriate to carry loads specified at Appendix A.

3.6.4 Suspension. The following applies:

- (a) The suspension **shall** have a manual suspension air dump valve for each component of the system;
- (b) An air gauge to assist the operator in evenly distributing the load throughout the system **shall** be provided;
- (c) Suspension travel limiters **shall** be provided. These devices prevent suspension over-travel while slinging or lifting the trailer for decking or sea transport. The devices **shall** be cables or chains fastened to the suspension beam or axle and the under frame at a length approximately equal to or less than the shock absorber extended stroke. The use of shock absorbers as travel limiters is not acceptable.

3.6.5 Tires and Wheels. The wheels, tires and rims **shall** be common for the complete system. The following applies:

- (a) The tires **shall** have size and ply ratings which comply with Tire and Rim Association Standards.
- (b) The tires **shall** have sufficient load ratings capable of handling max load capacity of the trailer.
- (c) The system **shall** have tire pressures marked near each of the tire locations.

- (d) The rims shall be non-polished aluminum rims
- (e) A hubodometer reading in kilometres shall be provided for each component of the system.
- (f) Each wheel station shall be equipped with loose wheel nut indicators.

3.6.6 Electrical System. The electrical system shall have the following features:

- (a) The electrical system shall be a 12-volt negative ground electrical system;
- (b) The electrical system shall have a standard 7-pin trailer receptacle; and
- (c) **Protected Wiring and Workmanship.** The wiring shall be protected by design and positioning to prevent damage and contact with spilled hydrocarbon fuels. This shall meet the minimum requirements of NFPA 407 (paragraph referring to **Vehicle Lighting and Electrical Equipment**). This shall include as a minimum electrical wiring used for the connection to the tractor vehicle designed for heavy-duty use, with positive engaging connectors, which are mounted securely to the trailer. In addition all wiring shall be protected by grommets when passing through metal. The harnesses shall be sealed harnesses and all connections treated with dielectric grease.

3.6.7 Lighting. The lighting system shall conform to CMVSS 108 requirements. All lighting shall be LED.

3.6.8 Landing Gear. Individual system components shall be equipped with inter-connected two-legged landing gear.

3.6.9 Towing Points. Two rear towing points positioned and of sufficient strength to permit recovery shall be provided.

3.6.10 Mud Flaps. Rubber mud flaps rear of the rear axles of each system component shall be provided. The mud flaps shall be black in colour without logos or markings.

3.6.11 Conspicuity Tape. Strips of reflective tape shall be applied in accordance with Transport Canada regulations.

3.6.13 Licence Plate Holder. An illuminated licence plate holder shall be provided at the rear of each component of the system.

3.6.14 Document Holder. A document holder shall be provided for each component of the system. The holder shall be installed on the left front of each component.

3.7 Semi-Trailer. The following are items specific to the low bed portion of the system. The semi-trailer shall be capable of operating separate of the complete system.

3.7.1 Dimensions. The following applies:

- (a) The semi-trailer shall have a suitable deck width; and through the use of deck extensions; to accommodate the load defined in Appendix A;
- (b) The semi-trailer shall have a minimum deck length of at least 7.3 metres;
- (c) The semi-trailer shall have main deck height not exceeding 965 mm - unladen;
- (d) A Landing Wheel Clearance from kingpin (LWC) shall be at least 2,057 mm.

3.7.2 Auxiliary Engine System (AES)

3.7.2.1 AES General. The following applies:

- (a) An engine to power the hydraulic system(s) shall be provided. The engine shall be located in the semi-trailer gooseneck and mounted on appropriate mounts to reduce vibration;
- (b) The AES shall have a magnetic drain plug for the oil pan;
- (c) The AES exhaust shall be directed away from controls, wiring and hoses;
- (d) A single slave cable connector with cover with 12-volt shall be provided;
- (e) The AES shall be equipped with a low temperature starting aid; and
- (f) The AES shall be equipped with a keyless electric start.

3.7.2.2 Engine Compartment.

- (a) The AES shall be contained within an engine compartment;
- (b) The engine compartment shall have access door(s) mounted on hinges that are designed to allow the door(s) to be swung open or be lifted straight up.
- (c) The door(s) shall have means to stay open when the operator is working on the engine.
- (d) The door(s) shall have louver(s) to allow air flow into the engine compartment.
- (e) The engine compartment shall be equipped with a heater.

- (f) The engine compartment **shall** have working lights.

3.7.2.2 Shut-down Protection. The AES **shall** be equipped with low oil pressure and high temperature automatic shutdown device(s).

3.7.2.3 Controls and Instruments. All AES controls and instruments **shall** be mounted on the left exterior of the gooseneck. The AES **shall** be equipped with; a temperature gauge, an oil pressure gauge, a voltmeter or ammeter and an hour meter. The gauges **shall** be installed in an illuminated compartment.

3.7.2.5 Filtration Systems. The AES **shall** be equipped with a dry type air filter and spin off replaceable oil and fuel filters.

3.7.2.6 Fuel Tank. A fuel tank with a capacity of at least 18-litres (4-imp gals) and equipped with a fuel gauge **shall** be provided.

3.7.3 Trailer Construction

3.7.3.1 Trailer Frame. The following applies:

- (a) The semi-trailer deck **shall** be equipped with side extensions (outriggers). The side extensions **shall** add at least 254 mm to each side of the trailer, for a total of at least a 508 mm increase to the overall width. The side extensions **shall** be equipped with suitable, removable planking. The planking **shall** be the length of the working/main deck. The side extensions **shall** have the capacity to support a load equivalent to the deck area and **shall** have a lockable device to secure the side extensions in place. When not in use, the side extensions **shall** fold out of the way and flush with the top flange.
- (b) The semi-trailer **shall** be equipped with two tapered, flip-up, ramps one on each side of the semi-trailer. The ramps **shall** be located between the outside edge and the side of the gooseneck, and be as wide as possible. Ramps **shall** be securely stowed using chains while not in use. The ramps will be used to facilitate the loading of vehicles and equipment.
- (c) Two hinged bridging plates located between the main deck and the rear portion of the semi-trailer over the axles **shall** be provided. These plates will allow wheeled vehicles to access the rear of the trailer, when the main deck is in its highest position, and **shall** be approximately the same width as the front flip-up ramps.
- (d) All pin and pivot holes **shall** be equipped with replaceable and/or greasable bushings. The surface of each pin **shall** be knurled/spiralled to allow grease to encircle the pin and reach the end plate.

3.7.3.2 Semi-Trailer Deck Floor. The following applies:

- (a) The deck floor shall be covered with rough wood planks of sufficient thickness to accommodate the load. The rear deck area shall be steel checker plate.
- (b) The deck floor shall be treated with Linseed oil or equivalent product.
- (c) Wheel openings shall be covered as this area will be used to transport vehicles or cargo.

3.7.3.3 Semi-trailer Gooseneck. The following applies:

- (a) The semi-trailer shall be equipped with a hydraulically operated, removable gooseneck.
- (b) The mechanism to lock the gooseneck at the various heights shall be a cam and lever design, not pins (An antler system is the preferred design).
- (c) If the gooseneck is equipped with an extension nose, the extension nose shall be capable of being deployed or flipped back onto the gooseneck remotely through the use of the trailer hydraulic system.
- (d) The gooseneck shall be equipped with a hydraulic stinger that is capable of supporting the weight of the gooseneck during loading and unloading procedures. The design of the stinger shall be such as to eliminate any lateral movement of the gooseneck when it is only attached to the vehicle fifth wheel and the vehicle is moving.
- (e) The main vertical locking pin and pin lock shall be air operated, with the controls on the exterior left side of the gooseneck.

3.7.3.5 Hydraulic System. The following applies:

- (a) The manufactures standard hydraulic tank sized for the system shall be provided. The tank shall include the following features:
 - i. An intake filter screen.
 - ii. An inspection plate bolted to a raised lip located on the top of the tank.
 - iii. An external fluid level indicator.
- (b) The hydraulic system shall contain the manufactures standard filtering system/elements;
- (c) Auxiliary couplers with captive protective caps and a selector valve in order to power the system from an external source shall be provided;

- (d) The manufactures standard wet kit connector shall be provided; and
- (e) All hydraulic controls shall be conveniently located on the left exterior side of the gooseneck.

3.7.3.6 Features. The following applies:

- (a) Exterior Side Tie-down Points. The semi-trailer shall be equipped with eight tie-down points (D-rings) on each exterior side beam and an additional four tie-down points (D-rings) on each side of the decking above the rear axles. Two additional flush mounted tie-down points (D-rings), one on each side, at the rear of the semi-trailer shall be provided. Tie-down ratings shall be at least 9,072 kg.
- (b) Main Deck/Rear Deck Mounted Tie-down Points. Two rows, evenly spaced, recessed flush mounted tie-down rings with drain holes, bolted to the main deck floor and not more than 203 mm from the sides shall be provided. Each row will contain nine tie-downs. An additional two rows, of four tie-downs on each side of the rear deck shall be provided. Tie-down rating shall be at least 9,072 kg.
- (c) Gooseneck Mounted Tie-down Points. Two rows of two tie-downs on the gooseneck shall be provided. Tie-down rating shall be at least 9,072 kg.
- (d) Storage Compartments. Two, lockable, upper deck, storage compartments shall be provided. The compartments floor shall be covered with DRI decking. The floor of the compartment(s) shall be equipped with drain holes with evacuation valves. The compartment size shall be of sufficient size to accommodate spare straps, chains and fluids.

3.8 Paint and Corrosion Protection. The following is applicable to the complete system:

3.8.1 Paint Finish

- (a) The complete system shall be painted in accordance with the manufacturer's best production procedures using standard commercial practices and materials, rendering a durable finish of the required film thickness and a smooth appearance free from runs, sag and orange peel.
- (b) A phosphate treatment plus primer or an E-coat system shall be provided on all ferrous metals. This shall be followed by two coats of paint.
- (c) A cleaning and etching treatment plus primer followed by two coats of paint shall be provided on all aluminium components.
- (d) A clear exterior grade sealer shall be applied on all wooden areas.

3.8.2 Paint Colour

- (a) The colour **shall** be Olive Drab for all main components. The colour **shall** be 34094 in accordance with FED STD 595. Colour samples **shall** be provided for TA approval after contract award.
- (b) All lettering and symbols on the outside **shall** be flat black using paint compatible with topcoat selected. The colour **shall**^(E) be 34030 in accordance with FED STD 595. Colour samples **shall** be provided for TA approval after contract award.
- (c) Commercial items prefinished by the OEM may be exempt upon Technical Authority approval.

3.8.3 Corrosion Protection System. The following applies:

- (a) Dissimilar metals **shall** be protected against galvanic corrosion.
- (b) A rust prevention coating **shall** be applied to the trailer underbody. The product applied **shall** be a manufacturer's standard product that meets industry standard such as Tectyl, Krown Rust, or Rust Check.

3.9 Trailer Markings

3.9.1 Identification Plates. The following information **shall** be provided as a minimum, permanently marked and in a conspicuous and protected location:

- (a) Manufacturer, model, model year and serial number information **shall** be included on the identification plates.
- (b) GAWR and GVWR ratings for each component **shall** be included on the identification plates.
- (c) Maximum payload of the trailer **shall** be included on the identification plates.

3.9.2 Warning and Instruction Plates. The following **shall** be provided:

- (a) All warning and instruction plates **shall** be within easy view of the user and in accordance with standard commercial practice;
- (b) International symbols and/or bilingual markings **shall** be used; and
- (c) Instructions for engine starting and any other special procedures to be followed **shall** be included.

3.10 Lubricants and Fluids. The trailer **shall** be serviced with standard lubricants and fluids compatible with the delivery location and season.

3.11 Deliverable Information. The following is applicable to the complete system. The following items shall be provided:

- (a) **Equipment Manuals.** The following manuals shall be provided:
 - i. **Operator's/Owner's Manuals.** Operator's manuals shall be furnished in a bilingual format or as 2 manuals in a single binder (one English, one French). **A hard copy of the Operator's manual shall be delivered with each system.**
 - ii. **Parts Manual(s).** A Parts Manual(s) in English (French translation is desirable) shall be provided.
 - iii. **Maintenance (Shop Repair) Manuals.** A Maintenance (Shop Repair) Manual in English (French translation is desirable) shall be provided.
 - iv. **Wiring Diagram.** A colour coded wiring diagram(s) for the complete system shall be provided. The diagram(s) shall include numbering information for all connections. Wiring information required for the AES shall also be provided.
 - v. **Hydraulic System Diagram.** A complete schematic of the hydraulic system for all components shall be provided.
 - vi. A digital copy of the Equipment Manuals on CD/DVD-ROM will be acceptable. This shall include all the manuals. For usability, CD/DVD-ROM shall not require password to be accessed. The digital files shall be in pdf format and shall not require an auto execute (installation) to operate.
 - vii. **Sample Manuals.** A set of Sample Manuals, including all Equipment Manuals shall be provided. The sample manuals shall be delivered to the Technical Authority before delivery of trailers. Sample manuals will not be returned. The Technical Authority will provide manual approval or comments within 30 days.
- (b) **Data Summary.** The Contractor shall provide a Data Summary to the Technical Authority for each complete semi-trailer make/model furnished. The Contractor shall complete Data Summary by filling in the required data and an electronic picture into a Data Summary template provided by the Technical Authority.
- (c) **Photographs.** The contractor shall provide the Technical Authority with two (2) digital pictures, one of the left front three-quarter view, and one of the right rear three-quarter view. All pictures shall be taken with a clear uncluttered background.

- (d) **Warranty Letter.** The contractor **shall** provide the completed Warranty Letter with each trailer shipped in the format approved by the Technical Authority. The Contractor **shall** send a copy of the completed Warranty Notification Letter to the Technical Authority for each trailer shipped, at shipment. A copy of the Warranty Letter **shall** be forwarded to the Technical Authority in electronic format.
- (e) **Line Setting Ticket.** The Contractor **shall** provide a Line Setting Ticket, or equivalent, describing the components provided on the system. The Line Setting Ticket **shall** accompany each completed trailer to the final delivery point. An additional copy of the Line Setting Ticket **shall** be forwarded to the Technical Authority as soon as it is available.
- (f) **Familiarization.** The Contractor **shall** provide a minimum of three hours of Operator familiarization training to a maximum of eight persons and a minimum of eight hours of Maintainer familiarization training to a maximum of eight persons. A proof of familiarization instruction completion **shall** be provided through a Familiarization Instruction Completion Form. The Form **shall** be completed and signed by an authorized representative. The form **shall** accompany the payment invoice. Familiarization **shall** be available in both French and English. The Technical Authority will provide Familiarization Instruction Completion Form template.

4.0 QUALITY ASSURANCE PROVISIONS

- 4.1 Performance and Verification Testing.** The first system **shall** be examined and performance tested by the contractor, to ensure item by item conformance to specified requirements. The QAR and/or the Technical Authority may witness this testing and operate the system sufficiently to assess the handling characteristics.

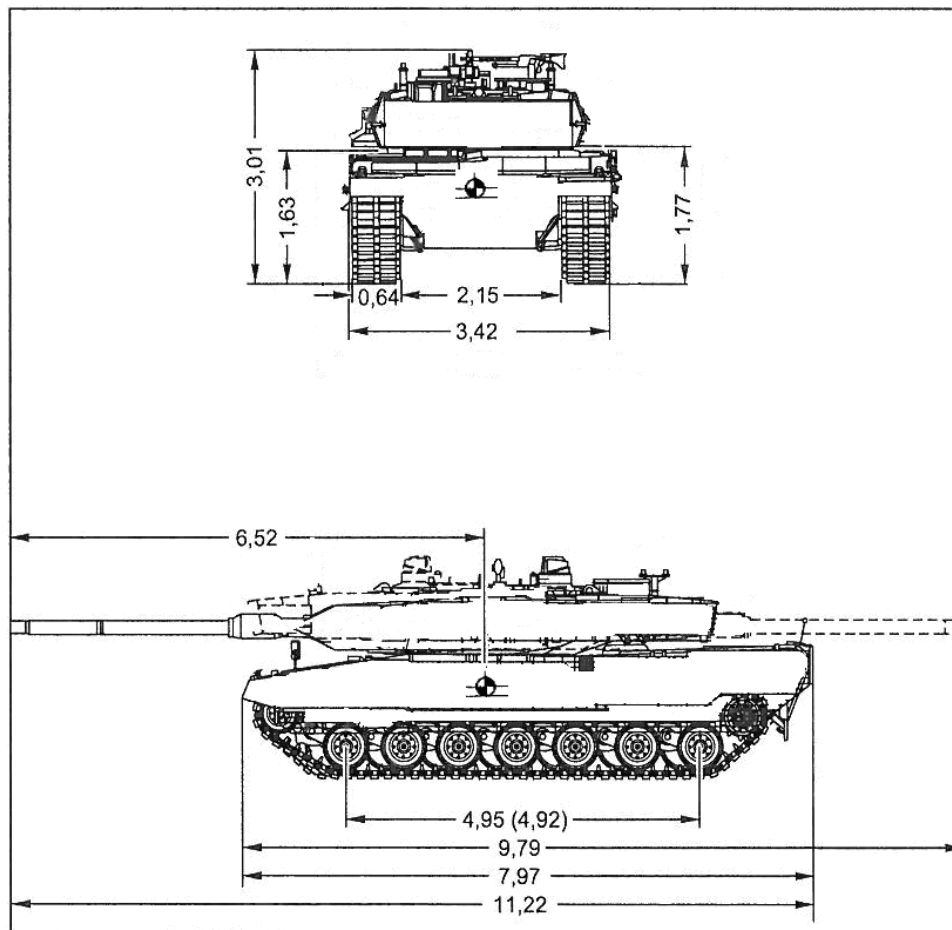
Appendix A

Dimensions are metric:

Common dimensions for each scenario

Wheelbase	4950 mm
Overall track width	3420 mm
Track base (inside dimension)	2150 mm
Hull clearance	500 mm
Track width	640 mm
Approach angle front	37°
Approach angle rear	40°

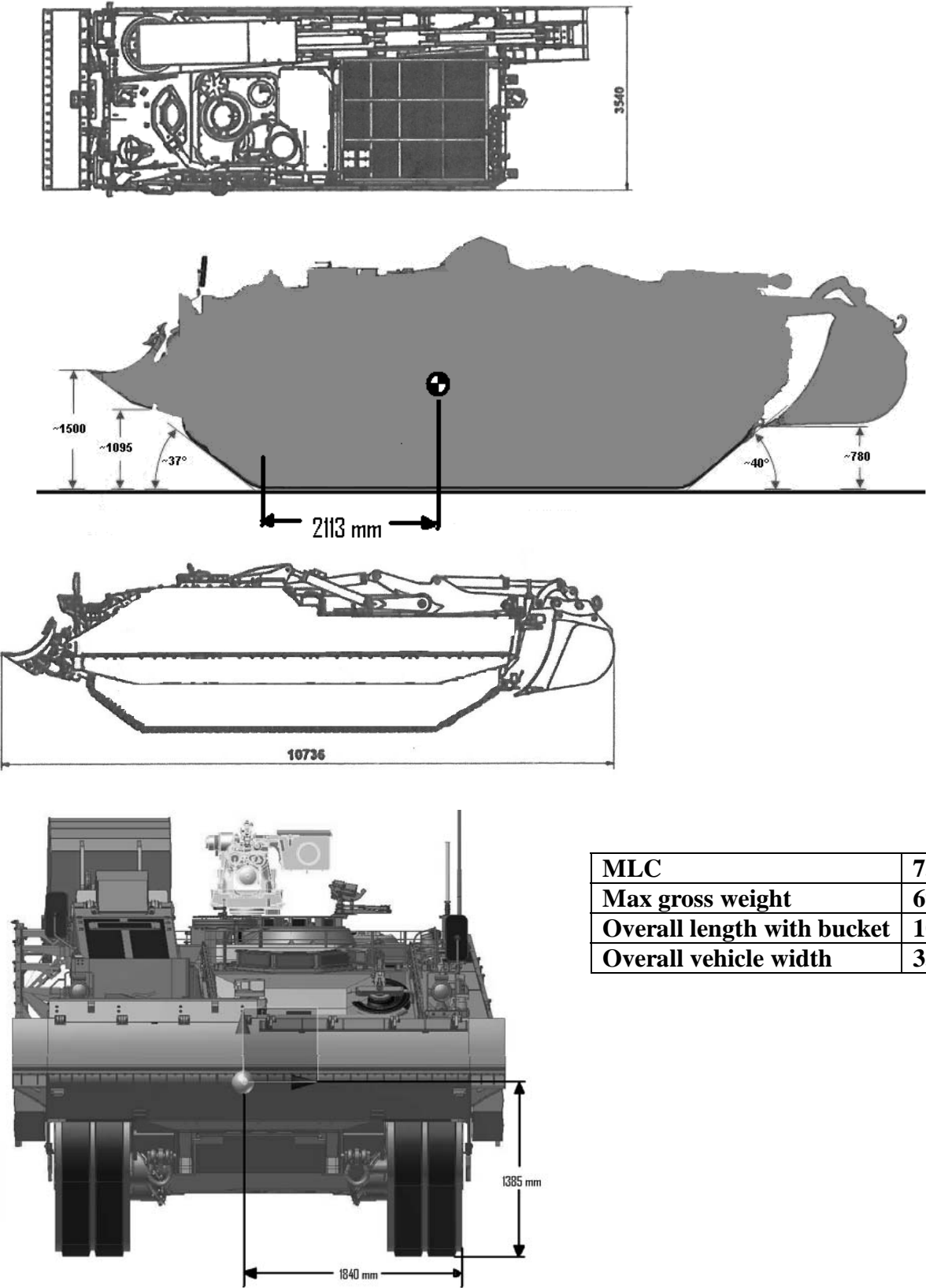
Scenario 1 Leo2 A6M



**** Travel direction on trailer is with barrel pointed to the rear of the vehicle (follow dotted lines).**

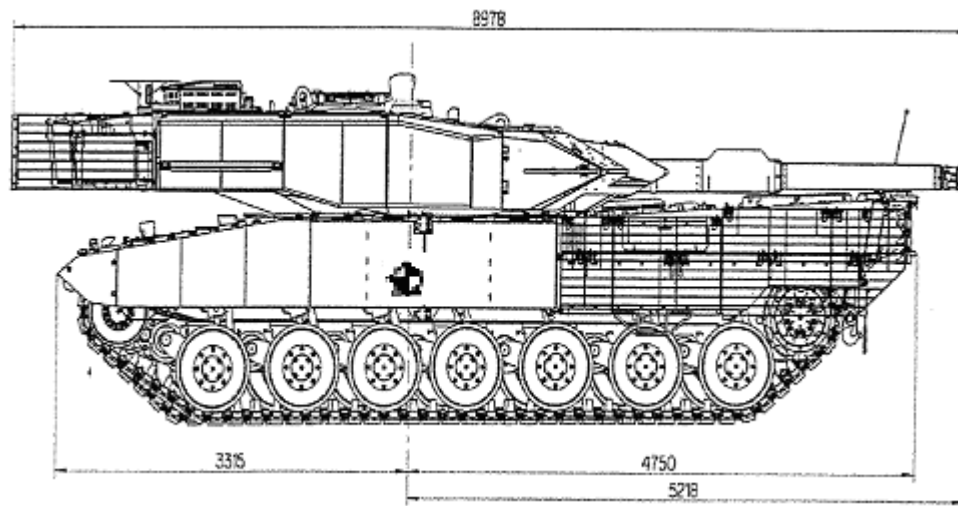
MLC	70 000 kg
Max gross weight	63 500 kg
Overall length with barrel to the rear	9790 mm

Scenario 2 AEV



MLC	75 000 kg
Max gross weight	69 500 kg
Overall length with bucket	10 763 mm
Overall vehicle width	3540 mm

Scenario 3 Leo 2 A4 Can



MLC	80 000 kg
Max gross weight	62 000 kg
Overall length with barrel	8978 mm
Overall vehicle width	4051 mm
Overall height	2783 mm