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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

<b>Title - Sujet</b> TANDEM SLIDING AXLE TRAILER	
<b>Solicitation No. - N° de l'invitation</b> W6399-15GD68/A	<b>Amendment No. - N° modif.</b> 001
<b>Client Reference No. - N° de référence du client</b> W6399-15GD68	<b>Date</b> 2015-05-13
<b>GETS Reference No. - N° de référence de SEAG</b> PW-\$\$HP-923-67269	
<b>File No. - N° de dossier</b> hp923.W6399-15GD68	<b>CCC No./N° CCC - FMS No./N° VME</b>
<b>Solicitation Closes - L'invitation prend fin</b> <b>at - à 02:00 PM</b> <b>on - le 2015-06-17</b>	
<b>F.O.B. - F.A.B.</b> <b>Plant-Usine:</b> <input type="checkbox"/> <b>Destination:</b> <input checked="" type="checkbox"/> <b>Other-Autre:</b> <input type="checkbox"/>	
<b>Address Enquiries to: - Adresser toutes questions à:</b> Martin, Erik	<b>Buyer Id - Id de l'acheteur</b> hp923
<b>Telephone No. - N° de téléphone</b> (819) 956-3842 ( )	<b>FAX No. - N° de FAX</b> (819) 953-2953
<b>Destination - of Goods, Services, and Construction:</b> <b>Destination - des biens, services et construction:</b>	

Instructions: See Herein

Instructions: Voir aux présentes

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

Solicitation No. - N° de l'invitation

W6399-15GD68/A

Amd. No. - N° de la modif.

001

Buyer ID - Id de l'acheteur

hp923

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

W6399-15GD68

File No. - N° du dossier

hp923W6399-15GD68

CCC No./N° CCC - FMS No/ N° VME

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THIS AMENDMENT **001** IS ISSUED TO MODIFY THE REFERENCED SOLICITATION AS FOLLOWS:

- 1- Answer question #1 from a potential bidder;
- 2- Remove paragraph 3.7.4 (b) of the Annex B; and
- 3- Publish the revised Annex B (Version dated May 12 2015).

**Question 1:**

3.7.4 Gooseneck

(b) An air activated main vertical locking pin with controls on the left (road) side of the gooseneck for attaching the gooseneck to the towing vehicle.

This specification is not applicable to a sliding axle trailer as the gooseneck cannot be removed for loading operations over the front of the trailer.

Typically, an air activated main vertical locking pin is used to lock a removable gooseneck in place for travel.

Will the customer either remove this requirement or provide details on the intended function of this feature?

**Answer 1:**

Remove paragraph 3.7.4. (b) from Annex B.

ALL OTHER TERMS AND CONDITIONS REMAIN UNCHANGED.



National Défense  
Défence nationale

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**The Canadian Forces Material Transportation Equipment**  
**PURCHASE DESCRIPTION (PD) FOR TANDEM SLIDING AXLE TRAILER**

12 May 2015

OPI: DLP 6/DAAT 6  
National Defence Headquarters  
Major General George R. Pearkes Building  
Ottawa, Ontario  
K1A 0K2

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Issued on Authority of the Chief of the Defence Staff  
Publiée avec l'autorisation du Chef d'état-major de la Défense

Canada



National Défense  
Défence nationale

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## 1.0 **SCOPE**

### 1.1 Scope

This purchase description covers the requirements for a Tandem Sliding Axle Trailer to transport freight, vehicles and heavy equipment

### 1.2 Instructions

The following instructions and definitions apply to the interpretation of this purchase description:

- (a) Requirements, which are identified by the word “shall”, are mandatory. Deviations will not be permitted;
- (b) Requirements identified by “shall<sup>(E)</sup>” are mandatory. The Technical Authority will consider substitutes/alternatives for acceptance as an Equivalent;
- (c) Requirements identified with a “will” define actions to be performed by Canada and require no action/obligation on the Contractor’s part;
- (d) Where “shall”, “shall<sup>(E)</sup>”, or “will” are not used, the information provided is for guidance only;
- (e) In this document "provided" shall mean "provided and installed";
- (f) Where technical certification is required, a copy of the certification or an acceptable proof of compliance shall be provided upon request;
- (g) Metric measurements shall be used to define the requirement. Other measurements are for reference only and may not be exact conversions; and
- (h) 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 apply to the interpretation of this Purchase Description:

- (a) “Technical Authority” - The government official responsible for technical content of this requirement;
- (b) “Equivalent” - A standard, means, or component type, which has been accepted by the Technical Authority as meeting the specified requirements for form, fit, function and performance;
- (c) “Proof of Compliance” is defined as an unaltered document, such as a brochure and/or technical literature and/or a third party test report provided by a nationally and/or internationally recognized testing facility and/or a report generated by a nationally and/or internationally recognized third party software. The document shall provide detailed information on each performance requirement and/or specification. Where a document submitted as Proof of Compliance does not cover all the performance requirements and/or specifications or when no such document is available or when modifications to the original equipment or customization are required to achieve the performance requirements and/or specifications, a Certificate of Attestation (as a separate document) signed by a senior engineer representing the Original Equipment Manufacturer (OEM) detailing the

modifications and how they meet the performance requirements and/or specifications shall be provided. The certificate shall detail all performance requirements and/or specifications required to substantiate compliance. One certificate can be provided for one or all performance requirements and/or specifications; and

- (d) “Road legal” are the characteristics that a vehicle must have so that it can be legally operated on all Canadian highway and secondary roads, not having special restrictions, without requiring overweight or dimensional permits.

1.4 Configuration Capability Table

The following table details the design requirements, which shall be met for the configuration offered:

Table 1: Performance and Dimension Summary

CHARACTERISTIC	CLAUSE	VALUE	UNITS
MINIMUM PAYLOAD	3.6.1(a)	31,751	kg
		70,000	lbs.
MINIMUM SPEED	3.6.1(b)	105	km/h
		65	mph
MAXIMUM OVERALL WIDTH	3.6.2(a)	259	cm
		102	in
MAXIMUM OVERALL LENGTH	3.6.2(b)	16.2	m
		53	ft
MINIMUM MAIN DECK LENGTH	3.6.2(c)	13	m
		42.5	ft
MINIMUM MAIN DECK HEIGHT (UNLADEN)	3.6.2(d)	0.9	cm
		38	in
MINIMUM GOOSNECK DECK LENGTH	3.6.2(e)	2.7	m
		8.75	ft
MINIMUM LANDING WHEEL CLEARANCE	3.6.2(f)	206	cm
		81	in
MINIMUM YIELD STRENGTH (MAIN FRAME BEAMS)	3.7.1(a)	689	MPa
		100,000	psi
MINIMUM YIELD STRENGTH (LOAD BEARING CROSS MEMBERS)	3.7.1(b)	552	MPa
		80,000	psi
MINIMUM OUTRIGGERS SIDE EXTENSION (EACH)	3.7.1(c)i.b	254	mm
		10	in
MAXIMUM FRONT OF TRAILER TO KINGPIN DISTANCE	3.7.3(b)	53	cm
		21	in
MINIMUM KINGPIN HEIGHT	3.7.3(c)	122	cm
		48	in
MINIMUM AXLE CAPACITY (EACH)	3.10	11,340	kg
		25,000	lbs

1.5 Delivery Requirement Summary

The following table details the delivery requirements:

Table 2: Delivery Requirement (Mandatory)

Configuration	Quantity
Tandem Sliding Axle Trailer	2

Table 3: Delivery Requirement (Optional – Within 18 Months of Contract Award)

Configuration	Quantity
Tandem Sliding Axle Trailer	2

## 2.0 APPLICABLE DOCUMENTS

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

SAE Handbook  
Society of Automotive Engineers Inc.  
400 Commonwealth Dr.  
Warrendale, PA, 15096  
www.sae.org

Canadian Motor Vehicle Safety Standards (CMVSS)  
International Standards Council of Canada  
Safety Acts and Regulations  
Standardization Branch, 350 Sparks St  
Suite 1200, Ottawa, Ontario K1P 6N7

## 3.0 REQUIREMENTS

### 3.1 Standard Design

The Tandem Sliding Axle Trailer shall:

- (a) Be the latest model from a manufacturer who has demonstrated acceptability by manufacturing and selling this type and size class of trailer for at least five (5) years;
- (b) Have engineering certification available, upon demand, for this vehicle/equipment from the original manufacturers of major equipment systems and assemblies;
- (c) Conform to all applicable laws, regulations and industry standards governing manufacture, safety, noise levels and pollution in effect in Canada at time of manufacture;
- (d) Not have system and component capacities increased above published ratings (i.e. product or component brochures); and
- (e) Include all components, and accessories normally supplied for the intended equipment application, although they may not be specifically described in this Purchase Description.

### 3.2 Operating Conditions

The Tandem Sliding Axle Trailer, with the rated payload, shall operate safely and efficiently on paved roads, gravel roads and dirt roads with severe washboard, pot holes and off-road terrain in year round conditions including mud, snow and ice in the temperature range of -34°C to 37°C.

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### 3.3 Vehicle Safety Regulations

The Tandem Sliding Axle Trailer shall meet the provisions of the Canada Motor Vehicle Safety Act in effect upon the date of manufacture of the vehicle. The completed trailer shall have a Safety Compliance Certification Label with a National Safety Mark (NSM), as a seal of compliance. The bidder shall submit, upon request, variant equipment integrator National Safety Mark (NSM) certification number and a proof of registration with Transport Canada as a Final Stage Manufacturer for the applicable variant equipment.

### 3.4 Human Engineering and Safety

The Tandem Sliding Axle Trailer, all systems and components shall:

- (a) Be designed for easy performance of all maintenance and repair tasks with a minimum of special tools including:
  - i. A 95th percentile male or 5th percentile female is able to easily access all engine, drive train heating/cooling system, electrical and hydraulic components for preventive maintenance, removal and repair tasks; and
  - ii. Have access panels that are not permanently attached (i.e. no riveted plates);
- (b) Be safe and easy to use by a 95th percentile male or 5th percentile female, in accordance with SAE Rule B3.9.4, under all operating conditions;
- (c) Have all entry and exit points equipped with handles and steps suitably positioned, to accommodate a 95th percentile male or a 5th percentile female under all operating conditions; and
- (d) Be equipped, where required for operator safety, with safety features such as warning and instruction plates, non-slip walking surfaces and heat shields.

### 3.5 General Description

The Tandem Sliding Axle Trailer shall have the following:

- (a) A main deck designed to load, unload and transport heavy equipment requiring no ramp ; and
- (b) Dual tandem hydraulic sliding rear axles for manipulation of the main deck to permit lowering for loading and unloading vehicles or equipment.

### 3.6 Performance and Dimensions

#### 3.6.1 Performance

The Tandem Sliding Axle Trailer shall:

- (a) Have a payload capacity of no less than that given as "MINIMUM PAYLOAD" in the Configuration Capability Table;
- (b) Be capable of being towed at a speed of no less than that given as "MINIMUM SPEED" in the Configuration Capability Table;

#### 3.6.2 Dimensions

The Tandem Sliding Axle Trailer shall<sup>(E)</sup> have the following nominal dimensions:

- (a) An overall width of no more than that given as "MAXIMUM OVERALL WIDTH " in the Configuration Capability Table;

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- (b) An overall length of no more than that given as "MAXIMUM OVERALL LENGTH " in the Configuration Capability Table;
- (c) A useable main deck length of no less than that given as "MINIMUM MAIN DECK LENGTH" in the Configuration Capability Table;
- (d) A height from the ground to the main deck, when unladen, of no less than that given as "MINIMUM MAIN DECK HEIGHT (UNLADEN)" in the Configuration Capability Table;
- (e) A gooseneck deck length of no less than that given as "MINIMUM GOOSENECK DECK LENGTH" in the Configuration Capability Table;
- (f) Landing Wheel Clearance from Kingpin (LWC) of no less than that given as "MINIMUM LANDING WHEEL CLEARANCE" in the Configuration Capability Table.

### 3.7 Construction

#### 3.7.1 Frame

The Tandem Sliding Axle Trailer frame shall<sup>(E)</sup> be as follows:

- (a) Full length, one-piece (no splices) high strength steel "I" beam main frame rails (minimum four (4)) with a yield strength of no less than that given as "MINIMUM YIELD STRENGTH (MAIN FRAME BEAMS)" in the Configuration Capability Table;
- (b) One-piece high strength steel "I" beam load bearing cross members with a yield strength of no less than that given as "MINIMUM YIELD STRENGTH (LOAD BEARING CROSS MEMBERS)" in the Configuration Capability Table;
- (c) Reinforced for towing points; and
- (d) Include side extension "Outriggers" as follows:
  - i. Two (2) outriggers, one (1) on each side of the trailer as follows:
    - a. Run the full length of the main deck;
    - b. A width (each) of no less than that given as "MINIMUM OUTRIGGERS SIDE EXTENSION (EACH)" in the Configuration Capability Table;
    - c. Include removable planking that is capable of supporting a load equivalent to the deck area;
    - d. Include locking devices to secure the extension in the extended and folded positions; and
    - e. When folded, be flush with the top flange of the main deck.

#### 3.7.2 Main Deck

The main deck shall<sup>(E)</sup> be as follows:

- (a) Have a floor as follows:
  - i. Nominal 33 mm (1.3 in) thickness Apitong;
  - ii. Treated with Linseed oil; and
  - iii. Not have any openings above the wheels;

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- (b) Be tapered downward at the rear to create a load angle of approximately 6° to allow equipment to be loaded on the main and gooseneck decks without the use of ramps; and
- (c) Permit hydraulic manipulation of the main deck as follows:
  - i. Utilizes the Auxiliary Power Unit or towing vehicle Hydraulic Wet Kit;
  - ii. Permit raising/positioning the forward part of the deck to facilitate loading equipment on to the gooseneck deck; and
  - iii. Remains flat on and connected to the towing vehicle 5th wheel at all time.

### 3.7.3 Kingpin

The Tandem Sliding Axle Trailer shall<sup>(E)</sup> have a kingpin as follows:

- (a) A nominal diameter of 51 mm (2 in);
- (b) A distance between the front of the trailer and the kingpin of no more than that given as "MAXIMUM FRONT OF TRAILER TO KINGPIN DISTANCE" in the Configuration Capability Table; and
- (c) A distance from the ground to the kingpin of no less than that given as "MINIMUM KINGPIN HEIGHT" in the Configuration Capability Table.

### 3.7.4 Gooseneck

The Tandem Sliding Axle Trailer shall<sup>(E)</sup> have a gooseneck as follows:

- (a) Have a floor on the deck as follows:
  - i. Nominal 38 mm (1.5 in) thickness rough fir plank decking; and
  - ii. Treated with Linseed oil.

### 3.7.5 Landing Gear

The Tandem Sliding Axle Trailer shall<sup>(E)</sup> have a Landing Gear as follows:

- (a) An electrically operated inter-connected two legged, two-speed landing gear with self-leveling landing pads and a manual over-ride;
- (b) A crank handle located on the left hand (Drivers) side of the trailer; and
- (c) A minimum lifting capacity of 22,675 kg (50,000 lbs).

### 3.8 Auxiliary Power Unit

The Tandem Sliding Axle Trailer shall<sup>(E)</sup> have a diesel engine driven auxiliary power unit as follows:

- (a) Diesel Engine - Include a diesel engine as follows:
  - i. Minimum 25 HP liquid cooled diesel engine;
  - ii. Mounted in a weatherproof compartment within the gooseneck as follows:
    - a. Illuminated with LED work lights with a weather protected switch;
    - b. Access doors that swing open or lift straight up to permit operator access to the engine compartment when the trailer is transporting a load that prohibits the door(s) from being swung open;
    - c. Include devices to secure the doors in the open and closed positions; and
    - d. Include a louvered air inlet, minimum 20 cm by 20 cm (8 in by 8 in);

- iii. Shock mounted to reduce vibration transfer to the gooseneck and trailer;
  - iv. Instrumentation and controls mounted in an illuminated weatherproof compartment on the left (road) side of the gooseneck including the following:
    - a. A keyless ignition “Start/Stop” switch;
    - b. An engine coolant temperature gauge with an automatic high-temperature shutdown device;
    - c. An engine oil pressure gauge with an automatic low oil pressure shutdown device;
    - d. A voltmeter or ammeter; and
    - e. An engine running time gauge (hours);
  - v. Include a magnetic oil pan drain plug;
  - vi. A shielded exhaust system to prevent inadvertent contact with heated surfaces and directs exhaust away from controls, wiring and hoses;
  - vii. Cold weather starting aids to permit engine starting down to -35°C as follows:
    - a. A 110 VAC engine block/oil heater;
    - b. Glow plugs; and
    - c. A diesel-fired engine compartment heater (such as the Webasto Air Top 2000);
  - viii. Spin-on replaceable oil and fuel filters;
  - ix. Dry type air filter with replaceable elements;
  - x. Heavy-duty maintenance-free battery (ies) with a total capacity of no less than 700 Cold Cranking Amperes; and
  - xi. Manufacturer's standard sized steel fuel tank (minimum 18 liters (4 Imperial Gallons) with a level gauge and replaceable return filter;
- (b) Hydraulic System - A manufacturer's standard hydraulic system powered by the diesel engine as follows:
- i. Positive displacement hydraulic pump with minimum output of 27 liters per minute (6 Imperial gallons per minute) at 10 MPa (1500 psi);
  - ii. Have all hydraulic hoses subject to movement with the sliding axels encased in a flexible E-Chain;
  - iii. A hydraulic fluid reservoir as follows:
    - a. A capacity of no less than 45 liters (10 Imperial gallons); and
    - b. Includes the following:
      - 1. Intake filter screen;
      - 2. Inspection plate bolted to a raised lip located on the top of the tank and is accessible without removing other system components within the engine compartment; and
      - 3. External hydraulic fluid level indicator;
  - iv. Replaceable hydraulic filters in both the supply and return pressure lines;
  - v. Coupling system for connection to an external hydraulic supply as follows:
    - a. Include a manual selector valve; and
    - b. Couplers with captive protective caps as follows:
      - 1. On the forward side of the gooseneck to facilitate connection to the towing vehicle hydraulic wet kit; and
      - 2. On the left or right exterior side of the gooseneck to facilitate connection to an alternate source;
  - vi. Hydraulic Controls as follows:
    - a. Located on the left exterior side of the gooseneck;
    - b. Include clearly marked controls for all vehicle functions related to main deck manipulation and axle positioning; and

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- c. Include a wireless remote control;
      - vii. A hydraulic winch mounted on the gooseneck to assist loading as follows:
        - a. Minimum first layer capacity of 13,600 kg (30,000 lbs.);
        - b. Minimum 25 m (85 ft) long nominal 16 mm (0.6 in) diameter wire rope and hook with test strength of no less than the winch pull;
        - c. Include the following:
          - 1. Dual slope winch cable rollers at the front of the gooseneck;
          - 2. Air cable tensioner;
          - 3. Air operated winch free wheel; and
          - 4. Four (4) roller fairlead;
        - d. Include a wireless remote control;
- (c) Electrical System - The auxiliary power unit electrical system includes:
  - i. An engine driven alternator that will provide power to the auxiliary socket and maintain the batteries fully charged; and
  - ii. A single slave 12 VDC auxiliary socket connector with cover.

### 3.9 Braking System

The Tandem Sliding Axle Trailer shall<sup>(E)</sup> be equipped with air actuated service brakes and spring actuated parking brakes, which comply with Canadian Motor Vehicle Safety Standards (CMVSS) MVSR 121-1, as follows:

- (a) An anti-lock braking system equipped with four (4) sensors and two (2) modules (4S/2M), with the rear axle slaved to the forward axle;
- (b) S-cam type air brakes with automatic slack adjusters and outboard drums;
- (c) Include long stroke, spring actuated parking brake chambers (such as Neway Life Seal);
- (d) Include brake housing dust shields
- (e) Include colour-coded visual brake stroke indicators (such as Safe-T-Brake);
- (f) Include a wet air reservoir with drains as follows:
  - i. Pull type drain connected by a cable to a handle that is reachable from outside of the vehicle; and
  - ii. Heated automatic moisture expelling valve(s);
- (g) Colour coded glad hand couplers with dummy glad hand couplers equipped with a safety chain for each glad hand.

### 3.10 Axles

The Tandem Sliding Axle Trailer shall<sup>(E)</sup> have:

- (a) Sliding tandem axles as follows:
  - i. Each with a capacity of no less than that given as “MINIMUM AXLE CAPACITY (EACH)” in the Configuration Capability Table;
  - ii. Capable of forward/rearward undercarriage travel of approximately 5.4 m (17.6 ft) to allow manipulation of the main deck for loading and unloading; and
  - iii. Hydraulically actuated;

- (b) Dual wheels on each axle;

### 3.10.1 Suspension

The following shall<sup>(E)</sup> be provided:

- (a) An adjustable height air ride suspension with rating of 11,340-kgs (25,000-lbs) each axle;
- (b) An air gauge to assist the operator in evenly distributing the load;
- (c) Shock absorbers on all axles;
- (d) Automatic height control with a manual air suspension dump valve(s); and
- (e) Suspension travel limiters that prevent suspension over-travel while slinging or lifting the trailer such as 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.

### 3.11 Central Greasing System

The Tandem Sliding Axle Trailer shall<sup>(E)</sup> have the manufacturer's standard central greasing system for the sliding axle components.

### 3.12 Wheels and Tires

The Tandem Sliding Axle Trailer shall<sup>(E)</sup> have the manufacturer's standard wheels and tires as follows:

- (a) Certified by the manufacturer to be suitably sized and rated for the application and load;
- (b) Include a hub odometer that reads in kilometers, mounted on the forward left-hand wheel of the trailer;
- (c) Include two (2) spare tire/wheel assemblies mounted on the gooseneck in a location to be approved by the DND Technical Authority;
- (d) Include non-polished aluminum wheels with wheel nut torque indicators; and
- (e) Have tire pressures marked on a plaque near the axle location on both sides of the trailer.

### 3.13 Electrical System

The following shall<sup>(E)</sup> be provided:

- (a) A 12 Volt negative ground electrical system in accordance with CMVSS that utilizes Grote, Truck-Lite, sealed harnesses complete with bullet or spade lamp connectors that are compatible with all lamps, dipped in dielectric grease;
- (b) Truck/Trailer connectors located in accordance with SAE J 702 as follows:
  - i. A seven-pin trailer receptacle; and
  - ii. An Anti-Lock Braking System (ABS) trailer receptacle;
- (c) Wiring to be protected and positioned in order to prevent damage as follows:
  - i. Meets the requirements of NFPA 407 (Vehicle Lighting and Electrical System);

- ii. Prevents contact with spilled hydrocarbon fuels;
- iii. Includes insulating grommets when passing through metal; and
- iv. Utilizes heavy duty positive locking connectors to the towing vehicle;

(d) All components of the electric system to be easily accessible for servicing.

### 3.14 Lighting/Reflective Devices

The Tandem Sliding Axle Trailer shall<sup>(E)</sup> be equipped with the manufacturer's standard lighting/reflective devices, using LED lights where available, as follows:

- (a) Complies with all requirements of CMVSS;
- (b) Lights and reflectors recessed or otherwise protected from damage;
- (c) Lighting of a sealed unit design, with flexible rubber mounting rings and waterproof connectors; and
- (d) Includes the following lights/reflectors:
  - i. Three(3) red identification lights in a cluster, located at the centre of the rear of the trailer;
  - ii. A least one (1) licence plate light;
  - iii. Two (2) red clearance lights, one (1) on each side of the rear of the trailer;
  - iv. Four (4) amber clearance lights located as follows:
    - a. Two (2) located on either side of the front of the trailer; and
    - b. Two (2) located on the center of each side;
  - v. Four (4) reflectors, one (1) positioned at each of the front and rear corners of the trailer;
  - vi. Mid-section and rear clearance, stop and turn signal lights; and
  - vii. Wide load pullout lights at the front and rear corners.

### 3.15 Lubricants and Hydraulic Fluids

The Tandem Sliding Axle Trailer shall<sup>(E)</sup> be serviced with the manufacturer's standard lubricants and hydraulic fluids compatible with the delivery location and season.

### 3.16 Miscellaneous Equipment

#### 3.16.1 Equipment Location

All systems and components shall<sup>(E)</sup> be properly located and/or protected from road hazards such as water, mud and gravel.

#### 3.16.2 Towing/Tie-down Points

The following shall<sup>(E)</sup> be provided:

- (a) Two (2) rear towing points positioned and of sufficient strength to allow the loaded trailer to be recovered;
- (b) Railway tie-down points positioned and of sufficient strength to allow the loaded trailer to be secured and carried on a railroad car;
- (c) Exterior Frame Side Tie-down points as follows:
  - i. Minimum 9000 kg (20000 lbs) test strength (each); and
  - ii. Located as follows:
    - a. Eight (8) D-Rings evenly spaced along each exterior side of the main deck;

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- b. Four (4) D-Rings evenly spaced along each side of the main deck above the axles;  
and
  - c. Two (2) flush D-Rings at the rear of the trailer (one on each side);
- (d) Alternating Double Key Hole chain slots and stake pockets on 40 cm (16 in) centres on each exterior, top side of the main deck;
- (e) Main Deck Tie-down points as follows:
- i. Minimum 9000 kg (20000 lbs) test strength (each);
  - ii. Recessed, flush mounted with drain holes; and
  - iii. Located as follows:
    - a. Bolted to the main deck at no more than 20 cm (8 in) from the side of the deck;
    - b. Two (2) rows of nine (9) bent style D-Rings, one (1) row on the left (road) side of the main deck and (1) row along the right (curb) side of the main deck; and
    - c. An additional two (2) rows of four (4) bent style D-Rings, one (1) row on the left (road) side of the rear portion of the main deck and (1) row along the right (curb) side of the rear portion of the main deck;
- (f) Gooseneck Tie-down Points as follows:
- i. Minimum 9000 kg (20000 lbs) test strength (each); and
  - ii. Two (2) rows of two (2) bent style D-Rings, one (1) row on the left (road) side of the gooseneck deck and (1) row along the right (curb) side of the gooseneck deck.

### 3.16.3 Mud Flaps

Rubber mud flaps shall be provided on the rearmost axle.

### 3.16.4 Conspicuity Tape

Strips of reflective tape (such as 3M Scotchlite Diamond Grade 980) shall be applied in accordance with the CMVSS regulations.

### 3.16.5 Removable Placard Holders

Four (4) aluminum "Wide Load" placard holders shall be provided as follows:

- (a) One (1) each side of the main deck frame (two (2) total), centered front to rear;
- (b) One (1) at the rear, lower curbside corner; and
- (c) One (1) at the front, on the left front face of the main deck frame.

### 3.16.6 Flag Holders

Four (4) aluminum flag holders shall be provided as follows:

- (a) One (1) at each front corner of the main deck (two (2) total); and
- (b) One (1) at each rear corner of the secondary deck over the wheels (two (2) total).

### 3.16.7 Licence Plate Holder

An illuminated rear license plate holder shall be provided.

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### 3.16.8 Document Holder

A document holder shall<sup>(E)</sup> be provided, located at the front, on the left (road) side face of the main deck frame.

## 3.17 Paint and Corrosion Protection

### 3.17.1 Paint Finish

The Tandem Sliding Axle Trailer shall<sup>(E)</sup> be painted in accordance with the manufacturer's best production procedures rendering a durable finish at the required film thickness and a smooth appearance free from runs, sags and orange peel consisting of the following:

- (a) A phosphate treatment plus primer or an E-coat system on ferrous metals, followed by two (2) coats of paint or one (1) coat of paint and a clear coat;
- (b) A cleaning and etching treatment plus primer followed by two coats of paint on aluminum components; and
- (c) Install electrical, hydraulic and air lines after painting

### 3.17.2 Paint Color

The following shall<sup>(E)</sup> apply:

- (a) Black on exposed exterior surfaces normally painted for the commercial trade;
- (b) Black on chassis items such as frame and tailgate; and
- (c) Chromed, polished and mill finished surfaces need not be painted.

### 3.17.3 Corrosion Protection System

The following shall be provided:

- (a) Aftermarket rust proofing provided in addition to standard factory rust proofing. The treatment date will be directed by the Technical Authority to optimize seasonal rust prevention benefits. If not demanded prior to delivery, a pre-paid certificate authorizing treatment at an aftermarket outlet shall be provided with the vehicle;
- (b) Metal surfaces treated with a rust preventive oily film product having the following properties;
  - i. Moisture displacing;
  - ii. Creeping (capillary action);
  - iii. Low solvent content;
  - iv. Compatibility with rubbers, plastics and all other materials used in automotive construction;
  - v. Non toxic; and
  - vi. Minimal dripping;
- (c) The application includes, but is not limited to, the underside of fenders and hood, enclosed and boxed-in sections, seams, mouldings, crevices, weld points, underbody and exposed exterior brackets.

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#### 3.17.4 Corrosion Resistant Materials

The Tandem Sliding Axle Trailer shall<sup>(E)</sup> utilize stainless steel, zinc plated or aluminium rivets, and plastic black oxide brass fasteners designed to prevent galvanic corrosion.

#### 3.18 Identification

The following information shall be provided as a minimum, permanently marked and in a conspicuous and protected location:

- (a) Manufacturer's name, model number, model year and serial number; and
- (b) The GVWR and GAWR ratings.

#### 3.19 Warning and Instruction Plates

The Tandem Sliding Axle Trailer shall be equipped with warning and equipment operation instruction plates as follows:

- (c) Be in bilingual (English and French) format and within easy view of the operator;
- (d) Make use of graphic symbols as much as possible;
- (e) Include instructions for engine starting, hydraulic system operation and any other special procedures to be followed; and
- (f) Include maximum load rating permanently marked at each tie down location.

#### 3.20 Delivery Condition

The Tandem Sliding Axle Trailer shall be delivered to destination in a fully operational condition (serviced and adjusted) and compartment interiors and the exterior of the trailer shall be cleaned. If the trailer requires assembly at destination, the Contractor shall be responsible for all manpower and equipment to perform assembly. The consignee will provide the area required for assembly. For shipment verification, all items such as wheel wrenches, jacks, and all other tools, equipment and accessories, which are shipped loose with the equipment, shall be listed on the shipping certificate or to an attached packing note.

#### 3.21 Documentation and Support Items

The Contractor shall provide the following documentation and support items:

- (a) Items with each vehicle - The following items with the vehicle:
  - i. Complete sets of manuals provided on CD/DVD-ROM without password(s), special installation requirements or requiring an Internet connection;
  - ii. Operator's Manual – A bilingual Operator's manual in paper format, or as two manuals in a single binder (one English, and one French), including:
    - a. Instructions for the safe operation of the vehicle;
    - b. Daily operator maintenance instructions/checks (including lubrication);
    - c. Safety warnings; and
    - d. Hand signals (as required);
  - iii. Hydraulic System Schematic - A complete schematic of the hydraulic system including a list of all components;
  - iv. Parts Manual – A Parts Manuals in English (French translation is desirable) including:

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- a. Illustrations showing all components of the vehicle including equipment and accessories from other manufacturers that is supplied against the requirements of the contract including numbers for the itemization of the parts;
  - b. A listing of all itemized manufacturer's parts from the illustrations showing the manufacturer's part name and number, and a brief description of the item; and
  - c. Cross-reference relating manufacturer part number to the correct illustration figure and item number and to the part number of the original component manufacturer and that manufacturer's code number (NCAGE);
  - v. Maintenance (Shop Repair) Manual - A Maintenance (Shop Repair) Manual in English (French translation is desirable) including:
    - a. A trouble-shooting guide showing the steps and tests required to determine the exact cause of a problem and an explanation of what steps would be required to correct the problem(s);
    - b. A listing of the necessary tolerances, torque levels, and fluid volumes required; and
    - c. A description of the order of disassembly and assembly of the systems and components of the vehicle;
  - vi. Warranty Letter – A paper copy of the completed bilingual Warranty Letter with the vehicle shipped in the approved format; and
  - vii. Preventative Maintenance Replacement Parts Kit – A Preventative Maintenance Replacement Parts Kit including all items from the Preventative Maintenance Replacement Parts Kit List as approved by the TA;
- (b) The following documents provided to the Technical Authority:
- i. Warranty Letter – An electronic copy of the warranty letter for each vehicle;
  - ii. Sample Manuals – A set of sample manuals, including all of the above manuals, in electronic format;
  - iii. Electrical System Drawing - A complete coloured vehicle electrical schematic including the Electrical System, the Lighting System and the engine wiring with a list of all components;
  - iv. Data Summary - A bilingual Data Summary for the forklift by completing TA's template with data and vehicle pictures as follows:
    - a. One left-front three-quarter view; and
    - b. One right-rear three-quarter view;
  - v. Dimensional Drawing – A drawing in all three views that gives dimensions of vehicle components, sizes, etc. with the vehicle part number and manufacturer's name; and
  - vi. Preventive Maintenance Replacement Parts Kit List - A list of parts needed to perform preventive maintenance on the vehicle for a six (6) month period including all filters and filter elements. The list will be reviewed, amended (if required) and approved by the TA. The following information is to be provided for each item on the list:
    - a. Part description;
    - b. Original Equipment Manufacturer Part number;
    - c. Suggested quantity; and
    - d. Unit cost.

### 3.22 Training

The Contractor shall provide a one (1) day (8 hours) familiarization instruction for a maximum of eight (8) personnel, no later than one (1) month after delivery of the trailer. The instruction shall include the detailed operation and normal servicing of the trailer and shall be split into four (4) hour segments for operator familiarization and maintainer familiarization. The final dates are to be arranged with the TA.

3.23 Safety Recalls and Servicing Data

The Contractor shall provide the following information to all customer locations throughout the life expectancy of the trailer or for no less than ten (10) years:

- (a) Safety Recalls;
- (b) Manufacturer's Technical Service Bulletins (or equivalent); and
- (c) Manufacturer's part change information.

Note - This service can be made available as an Internet Service.

3.24 General

The Contractor shall ensure that spare parts required to properly maintain and repair the trailer are available for purchase for a period of ten (10) years.