

**RETURN BIDS TO:
RETOURNER LES SOUMISSIONS À:**

**Bid Receiving
PWGSC
33 City Centre Drive
Suite 480
Mississauga
Ontario
L5B 2N5
Bid Fax: (905) 615-2095**

**REQUEST FOR PROPOSAL
DEMANDE DE PROPOSITION**

**Proposal To: Public Works and Government
Services Canada**

We hereby offer to sell to Her Majesty the Queen in right of Canada, in accordance with the terms and conditions set out herein, referred to herein or attached hereto, the goods, services, and construction listed herein and on any attached sheets at the price(s) set out therefor.

**Proposition aux: Travaux Publics et Services
Gouvernementaux Canada**

Nous offrons par la présente de vendre à Sa Majesté la Reine du chef du Canada, aux conditions énoncées ou incluses par référence dans la présente et aux annexes ci-jointes, les biens, services et construction énumérés ici sur toute feuille ci-annexée, au(x) prix indiqué(s).

Comments - Commentaires

Title - Sujet Airbrake Trainers		
Solicitation No. - N° de l'invitation W2037-140023/A	Date 2013-09-16	
Client Reference No. - N° de référence du client W2037-140023		
GETS Reference No. - N° de référence de SEAG PW-\$TOR-212-6358		
File No. - N° de dossier TOR-3-36096 (212)	CCC No./N° CCC - FMS No./N° VME	
Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2013-10-28		Time Zone Fuseau horaire Eastern Daylight Saving Time EDT
F.O.B. - F.A.B. Plant-Usine: <input type="checkbox"/> Destination: <input checked="" type="checkbox"/> Other-Autre: <input type="checkbox"/>		
Address Enquiries to: - Adresser toutes questions à: Shaw, Marian		Buyer Id - Id de l'acheteur tor212
Telephone No. - N° de téléphone (905) 615-2065 ()		FAX No. - N° de FAX (905) 615-2060
Destination - of Goods, Services, and Construction: Destination - des biens, services et construction: DEPARTMENT OF NATIONAL DEFENCE CFB Borden 221 Craftsman Rd, Bldg A-254 Borden Ontario L0M 1C0 Canada		

Instructions: See Herein

Instructions: Voir aux présentes

Vendor/Firm Name and Address

**Raison sociale et adresse du
fournisseur/de l'entrepreneur**

Delivery Required - Livraison exigée 2014-03-31	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

Issuing Office - Bureau de distribution

Public Works and Government Services Canada
Ontario Region
33 City Centre Drive
Suite 480
Mississauga
Ontario
L5B 2N5

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PART 1 - GENERAL INFORMATION

1. Security Requirement

There is no security requirement associated with this bid solicitation.

2. Requirement

The requirement is detailed under Article 2 of the resulting contract clauses

3. Debriefings

Bidders may request a debriefing on the results of the bid solicitation process. Bidders should make the request to the Contracting Authority within 15 working days of receipt of the results of the bid solicitation process. The debriefing may be in writing, by telephone or in person.

PART 2 - BIDDER INSTRUCTIONS

1. Standard Instructions, Clauses and Conditions

All instructions, clauses and conditions identified in the bid solicitation by number, date and title are set out in the *Standard Acquisition Clauses and Conditions Manual* (<https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual>) issued by Public Works and Government Services Canada.

Bidders who submit a bid agree to be bound by the instructions, clauses and conditions of the bid solicitation and accept the clauses and conditions of the resulting contract.

The 2003 (2013-06-01) Standard Instructions - Goods or Services - Competitive Requirements, are incorporated by reference into and form part of the bid solicitation.

Subsection 5.4 of 2003, Standard Instructions - Goods or Services - Competitive Requirements, is amended as follows:

Delete: sixty (60) days

Insert: ninety (90) days

1.1 SACC Manual Clauses

B1000T (2007-11-30) Condition of Material

2. Submission of Bids

Bids must be submitted only to Public Works and Government Services Canada (PWGSC) Bid Receiving Unit by the date, time and place indicated on page 1 of the bid solicitation.

Due to the nature of the bid solicitation, bids transmitted by facsimile to PWGSC will not be accepted.

3. Enquiries - Bid Solicitation

All enquiries must be submitted in writing to the Contracting Authority no later than ten (10) calendar days before the bid closing date. Enquiries received after that time may not be answered.

Bidders should reference as accurately as possible the numbered item of the bid solicitation to which the enquiry relates. Care should be taken by bidders to explain each question in sufficient detail in order to enable Canada to provide an accurate answer. Technical enquiries that are of a proprietary nature must be clearly marked "proprietary" at each relevant item. Items identified as "proprietary" will be treated as such except where Canada determines that the enquiry is not of a proprietary nature. Canada may edit the questions or may request that the Bidder do so, so that the proprietary nature of the question is eliminated, and the enquiry can be answered with copies to all bidders. Enquiries not submitted in a form that can be distributed to all bidders may not be answered by Canada.

4. Applicable Laws

Any resulting contract must be interpreted and governed, and the relations between the parties determined, by the laws in force in Ontario.

Bidders may, at their discretion, substitute the applicable laws of a Canadian province or territory of their choice without affecting the validity of their bid, by deleting the name of the Canadian province or territory specified and inserting the name of the Canadian province or territory of their choice. If no change is made, it acknowledges that the applicable laws specified are acceptable to the bidders.

PART 3 - BID PREPARATION INSTRUCTIONS

1. Bid Preparation Instructions

Canada requests that bidders provide their bid in separately bound sections as follows:

Section I: Technical Bid (3 hard copies)

Section II: Financial Bid (2 hard copies)

Section III: Certifications (1 hard copies)

Prices must appear in the financial bid only. No prices must be indicated in any other section of the bid.

Canada requests that bidders follow the format instructions described below in the preparation of their bid:

- (a) use 8.5 x 11 inch (216 mm x 279 mm) paper;
- (b) use a numbering system that corresponds to the bid solicitation.

In April 2006, Canada issued a policy directing federal departments and agencies to take the necessary steps to incorporate environmental considerations into the procurement process [Policy on Green Procurement](http://www.tpsgc-pwgsc.gc.ca/ecologisation-greening/achats-procurement/politique-policy-eng.html)

(<http://www.tpsgc-pwgsc.gc.ca/ecologisation-greening/achats-procurement/politique-policy-eng.html>). To assist Canada in reaching its objectives, bidders should:

- 1) use 8.5 x 11 inch (216 mm x 279 mm) paper containing fibre certified as originating from a sustainably-managed forest and containing minimum 30% recycled content; and

- 2) use an environmentally-preferable format including black and white printing instead of colour printing, printing double sided/duplex, using staples or clips instead of cerlox, duotangs or binders.

Section I: Technical Bid

In their technical bid, bidders should explain and demonstrate how they propose to meet the requirements and how they will carry out the Work.

Section II: Financial Bid

Bidders must submit their financial bid in accordance with the Basis of Payment. The total amount of Applicable Taxes must be shown separately.

1.1 Exchange Rate Fluctuation

C3011T (2010-01-11), Exchange Rate Fluctuation

Section III: Certifications

Bidders must submit the certifications required under Part 5.

PART 4 - EVALUATION PROCEDURES AND BASIS OF SELECTION

1. Evaluation Procedures

- (a) Bids will be assessed in accordance with the entire requirement of the bid solicitation including the technical and financial evaluation criteria.
- (b) An evaluation team composed of representatives of Canada will evaluate the bids.

1.1 Technical Evaluation

1.1.1 Mandatory Technical Criteria

See Annex C, Technical Evaluation Criteria.

1.2 Financial Evaluation

1.2.1 Mandatory Financial Criteria

Bidders must submit their financial bid in Canadian Funds in accordance with the Basis of Payment, with their bid at time of bid closing.

1.2.2 Evaluation of Price

The price of the bid will be evaluated in Canadian dollars, Applicable Taxes excluded, FOB destination, Canadian customs duties and excise taxes included.

- 1.2.3 The evaluated price will be calculated using the Bidder's firm unit prices as provided in Annex B, multiplied by the total quantity for each line item. The evaluated price will be the total aggregate price of the extended prices for all line items.

2. Basis of Selection

2.1 Basis of Selection - Mandatory Technical Criteria

A bid must comply with the requirements of the bid solicitation and meet all mandatory technical evaluation criteria to be declared responsive. The responsive bid with the lowest evaluated price will be recommended for award of a contract.

PART 5 - CERTIFICATIONS

Bidders must provide the required certifications and documentation to be awarded a contract.

The certifications provided by bidders to Canada are subject to verification by Canada at all times. Canada will declare a bid non-responsive, or will declare a contractor in default, if any certification made by the Bidder is found to be untrue whether during the bid evaluation period or during the contract period.

The Contracting Authority will have the right to ask for additional information to verify the Bidder's certifications. Failure to comply with this request will also render the bid non-responsive or will constitute a default under the Contract.

1. Mandatory Certifications Required Precedent to Contract Award

1.1 Code of Conduct and Certifications - Related documentation

By submitting a bid, the Bidder certifies that the Bidder and its affiliates are in compliance with the provisions as stated in Section 01 Code of Conduct and Certifications - Bid of Standard Instructions 2003. The related documentation therein required will assist Canada in confirming that the certifications are true.

1.2 Federal Contractors Program for Employment Equity - Bid Certification

By submitting a bid, the Bidder certifies that the Bidder, and any of the Bidder's members if the Bidder is a Joint Venture, is not named on the Federal Contractors Program (FCP) for employment equity "[FCP Limited Eligibility to Bid](http://www.labour.gc.ca/eng/standards_equity/eq/emp/fcp/list/inelig.shtml)" list (http://www.labour.gc.ca/eng/standards_equity/eq/emp/fcp/list/inelig.shtml) available from [Human Resources and Skills Development Canada \(HRSDC\)](#) - Labour's website.

Canada will have the right to declare a bid non-responsive if the Bidder, or any member of the Bidder if the Bidder is a Joint Venture, appears on the "[FCP Limited Eligibility to Bid](#)" list at the time of contract award.

PART 6 - RESULTING CONTRACT CLAUSES

1. Security Requirement

There is no security requirement applicable to this Contract.

2. Requirement

The Contractor must provide the Truck/Tractor Airbrake Trainers and Trailer Airbrake Trainers in accordance with the Requirement at Annex A.

3. Standard Clauses and Conditions

All clauses and conditions identified in the Contract by number, date and title are set out in the *Standard Acquisition Clauses and Conditions Manual* (<https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual>) issued by Public Works and Government Services Canada.

3.1 General Conditions

2010A (2013-04-25) General Conditions - Goods (Medium Complexity), apply to and form part of the Contract.

3.2 Supplemental General Conditions

4001 (2013-01-28) Hardware Purchase, Lease and Maintenance, apply to and form part of the Contract.

4. Term of Contract

4.1 Delivery Date

All the deliverables must be received on or before 31 March 2014.

5. Authorities

5.1 Contracting Authority

The Contracting Authority for the Contract is:
Marian Shaw
Supply Specialist
Public Works and Government Services Canada
Acquisitions Branch
Ontario Region Directorate
33 City Centre Drive, Suite 480
Mississauga, Ontario L5B 2N5

Telephone: (905) 615-2065
Facsimile: (905) 615-2060
E-mail address: marian.shaw@pwgsc-tpsgc.gc.ca

The Contracting Authority is responsible for the management of the Contract and any changes to the Contract must be authorized in writing by the Contracting Authority. The Contractor must not perform work in excess of or outside the scope of the Contract based on verbal or written requests or instructions from anybody other than the Contracting Authority.

5.2 Project Authority

The Project Authority for the Contract is:

(To be provided at contract award).

The Project Authority is the representative of the department or agency for whom the Work is being carried out under the Contract and is responsible for all matters concerning the technical content of the Work under the Contract. Technical matters may be discussed with the Project Authority, however the Project Authority has no authority to authorize changes to the scope of the Work. Changes to the scope of the Work can only be made through a contract amendment issued by the Contracting Authority.

5.3 Contractor's Representative

Name: _____

Title: _____

Telephone No. _____

Facsimile No. _____

E-mail address: _____

6. Payment

6.1 Basis of Payment - Firm Price, Firm Unit Price(s) or Firm Lot Price(s)

In consideration of the Contractor satisfactorily completing all of its obligations under the Contract, the Contractor will be paid firm unit price(s), as specified in Annex B for a cost of \$ _____ (*amount to be inserted at contract award*). Customs duties are included and Applicable Taxes are extra.

Canada will not pay the Contractor for any design changes, modifications or interpretations of the Work, unless they have been approved, in writing, by the Contracting Authority before their incorporation into the Work.

6.2 Limitation of Price

SACC Manual clause C6000C (2011-05-16) Limitation of Price

6.3 Single Payment

SACC Manual clause H1000C (2008-05-12) Single Payment

7. Invoicing Instructions

7.1 The Contractor must submit invoices in accordance with the section entitled "Invoice Submission" of the general conditions. Invoices cannot be submitted until all work identified in the invoice is completed.

7.2 Invoices must be distributed as follows:

- (a) The original and one (1) copy must be forwarded to the address shown on page 1 of the Contract for certification and payment.
- (b) One (1) copy must be forwarded to the Contracting Authority identified under the section entitled "Authorities" of the Contract.

8. Certifications**8.1 Compliance**

Compliance with the certifications and related documentation provided by the Contractor in its bid is a condition of the Contract and subject to verification by Canada during the term of the Contract. If the Contractor does not comply with any certification, provide the related documentation or if it is determined that any certification made by the Contractor in its bid is untrue, whether made knowingly or unknowingly, Canada has the right, pursuant to the default provision of the Contract, to terminate the Contract for default.

9. Applicable Laws

The Contract must be interpreted and governed, and the relations between the parties determined, by the laws in force in Ontario.

10. Priority of Documents

If there is a discrepancy between the wording of any documents that appear on the list, the wording of the document that first appears on the list has priority over the wording of any document that subsequently appears on the list.

- (a) the Articles of Agreement;
- (b) the supplemental general conditions 4001 (2013-01-28) Hardware Purchase, Lease and Maintenance;
- (c) the general conditions 2010A (2013-04-25) - Goods (Medium Complexity);
- (d) Annex A Requirement;
- (e) Annex B, Basis of Payment
- (f) the Contractor's bid dated _____

11. SACC Manual Clauses

A9068C (2010-01-11) Government Site Regulations

12. Insurance

SACC Manual Clause G1005C (2008-05-12) Insurance

Solicitation No. - N° de l'invitation

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Amd. No. - N° de la modif.

Buyer ID - Id de l'acheteur

tor212

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

W2037-140023

File No. - N° du dossier

TOR-3-36096

CCC No./N° CCC - FMS No/ N° VME

ANNEX A

REQUIREMENT

Truck/Tractor Airbrake Trainers and Trailer Airbrake Trainers

The document is attached separately - 4 pages.

ANNEX B BASIS OF PAYMENT

Prices are firm, all inclusive in Canadian funds, FOB destination. Customs duties are included and Applicable Taxes are extra.

Item No.	Description	Qty	U of I	Firm Unit Price	Extended Price
For the supply and delivery of the following:					
01	Truck/Tractor Airbrake Trainers in accordance with the specifications detailed in Annex A, <u>and any other item or service required to complete the system as specified in Annex A.</u> Manufacturer: _____ Make and Model: _____	4	EA	\$	\$
02	Trailer Airbrake Trainers in accordance with the specifications detailed in Annex A, <u>and any other item or service required to complete the system as specified in Annex A.</u> Manufacturer: _____ Make and Model: _____	4	EA	\$	\$
03	Delivery charges to destination for total quantity of above line items, <i>if applicable.</i>	Lot	Lot	\$	\$
	Subtotal				\$
	GST / HST Extra (as applicable)				\$
	TOTAL				\$

Delivery Date

All the deliverables must be received on or before 31 March 2014.

The delivery date offered is _____ (as specified by the Bidder) taking into account the above mandatory delivery date.

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Amd. No. - N° de la modif.

Buyer ID - Id de l'acheteur

tor212

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

W2037-140023

File No. - N° du dossier

TOR-3-36096

CCC No./N° CCC - FMS No/ N° VME

ANNEX C

TECHNICAL EVALUATION CRITERIA

The document is attached separately - 7 pages.

Requirement

Airbrake Trainers

1. Objective

To procure four (4) Truck/Tractor Airbrake Trainers and four (4) Trailer Airbrake Trainers in support of the Royal Canadian Electrical and Mechanical Engineering School (RCEMES) training.

2. Background

Through evaluation of its training initiatives and the future objectives it has forecasted, the Training Establishment is continuing to transform the way it trains Vehicle Technicians.

RCEMES, Vehicle Company presently utilizes truck and trailer air brake simulators to deliver air brake training for Vehicle Technicians. These simulators are used by instructional staff to demonstrate maintenance procedures and to instruct the construction and operation of air brake systems and its components.

Students use the air brake simulators to perform maintenance tasks including testing, diagnosing and troubleshooting of its mechanical, electrical and pneumatic systems.

RCEMES presently has two truck and two trailer simulators to deliver training. The class sizes of 24 and the quantity of truck and trailer air brake simulators limits RCEMES's capability to deliver training in accordance with its training plan.

3. Deliverables

The contractor must provide four (4) Truck/Tractor and four (4) Trailer Airbrake Simulation Trainers which must meet the following criteria at time of delivery:

3.1. Technical Specifications

3.1.1. Truck/Tractor Trainers

- Must be Canadian Motor Vehicle Safety Standard (CMVSS) 121 compliant
- Must display three axles
- Must be able to interface with diagnostic service tools, PC or hand held
- Must have a 120 AC power supply/12v converter with power "ON" indicator
- Must have a master control panel with wheel speed control
- Must have a fully functional ABS/ATC system with indicator lights
- Must include an ABS light relay
- Must utilize compressed air to operate
- Must include fully functioning ABS modulator valves with gauge (11 bar)
- Must include a mud/snow simulation switch
- Must include a low air indicator light
- Must have a fully functioning park brake actuator and trailer supply valve
- Must have a trailer control valve
- Must have a working compressor governor
- Front brake chambers must be red in colour and include pressure gauges (7 bar)
- Rear brake chambers must be colour coded orange (emergency) and green (service)
- Must provide the user with real life system faults

- Must be equipped with a ¼ inch air line adapter
- Must have a working brake foot valve with micro adjustment
- Must include a forward, neutral and reverse switch
- All major components must be named on the trainer
- Must include an actual truck/tractor powertrain control module
- Electrical circuits must be fuse protected
- Supply tank to be colour coded blue
- Secondary tank to be colour coded red
- Primary tank to be colour coded green
- Must include a secondary gauge (11 bar)
- Must include a primary gauge (11 bar)
- Supply tank must incorporate a safety valve
- Must include a tractor protection valve
- Inter axle control valve must include a pressure gauge (11 bar)
- Must include a functioning reductor wheel
- All wheels must have speed sensors
- Front Wheel speed sensors must be red
- Rear Wheel speed sensors must be green
- Must include realistic graphic representation integrated with working and nonworking reductor wheels
- Must include working brake lights
- Must be equipped with a service air line and gland hand colour coded blue
- Must be equipped with an emergency brake air line and gland hand colour coded red
- Must incorporate a storage bracket for air lines and electrical connection when not connect to trailer
- Must provide the user with a J1585 data connector
- Must be mounted on castors durable enough to fully support the weight of the trainer and be sufficiently sturdy and rugged to permit continuous rolling movement on a workshop floor without failing. The castors must have steering and locking capability
- Must be constructed to an overall size of 410 mm high, 445 mm long, 360 mm wide, with an allowable deviation of +/- 10% of all dimensions

3.1.2. Trailer Trainers

- Must be Canadian Motor Vehicle Safety Standard (CMVSS) 121 compliant
- Must connect to and be operable by the truck/tractor air brake simulator
- Must include colour coded glad hand connectors
- Must have electrical connector for trailer lights
- Must include master control panel with wheel speed control

- All wheels must have speed sensors
- Trailer wheel speed sensors must be yellow
- Must have a working reductor wheel
- Must include realistic graphic representation integrated with working and nonworking reductor wheels
- Must utilize shop air through truck/tractor to operate
- Must have a 120 AC power supply/12v converter with power "ON" indicator
- Must include a trailer spring brake valve
- Must include two service/spring brake reservoirs (orange and blue) with 1,100 kPa gauges
- Must have blue colour coded service brake lines and yellow colour coded emergency spring brake lines
- Trailer brake chambers must be colour coded orange (emergency) and black (service)
- Must have a functioning ECU modulator assembly with pressure gauges (1,100 kPa)
- Must include functioning brake lights
- Must incorporate an ABS warning light
- Must have a fully functional ABS/PLC system
- Must provide the user with real life system faults
- Must be able to interface with diagnostic service tools, PC or hand held
- Must provide the user with a J1585 data connector
- Must be constructed to an overall size of 410 mm high, 220 mm long, 360 mm wide, with an allowable deviation of +/- 10% of all dimension.
- Must be mounted on castors durable enough to fully support the weight of the trainer and be sufficiently sturdy and rugged to permit continuous rolling movement on a workshop floor without failing. The castors must have steering and locking capability
- Must be fully operable when connected to the truck simulator
- Electrical circuits must be fused protected

3.1.3. Additional Requirements (for 3.1.1 and 3.1.2)

- Repair manuals must be supplied in both official languages
- The brake tubing must be colour coded to differentiate between the Supply System, the Primary System and the Secondary air systems.
- All air reservoirs must have drain valves
- The truck/tractor airbrake board must include a fully functional ABS/ATC system with the ability to insert a minimum of ten electrical faults for technician training purposes.
- The trailer airbrake board must have a fully functional ABS/PLC system with the ability to insert a minimum of five electrical faults for technician training purposes.

4. Performance Tasks (for 3.1.1 and 3.1.2)

4.1. Instructors

Instructors must have the ability to fault the training simulators so trainees can practice diagnosing and troubleshooting procedures. Specifically, instructors must be able to:

- Input faults into the training simulators mechanically
- Operate and demonstrate the trainer system as an actual vehicle

4.2 Basic Users

Users at all levels will use the trainer simulators for its designed purpose. Users must be able to:

- Perform enhanced manipulation of the trainer components
- Diagnose and troubleshoot the airbrake system
- Diagnose and troubleshoot the electrical/electronic system
- Obtain electronic parameters using diagnostic equipment
- Obtain technical data and information from the training simulators
- Perform test procedures on the training simulators
- Inspect and maintain components on the training simulators
- Operate the trainers as an actual vehicle

5. Performance Requirements (for 3.1.1 and 3.1.2)

The training simulators must uniformly provide all users with the ability to:

- Manipulate or move the training aid. As a minimum the user must be able to place the training simulators in a different location as deemed necessary to facilitate training. Large training simulators must be able to have wheels for easy manoeuvrability.
- Test components. The user must have the ability to exercise test procedures as outlined in reference manuals. The user must have the capability to use common automotive test equipment. Testing of components is directed from RCEMES and is conducted in accordance with the Training Plan.
- Name components in both official languages. The user must have the authorization to change the names of components as may be required in future use.
- Maintenance. Users must be able to manipulate and maintain components or the systems of the training aid as required.

6. Operability (for 3.1.1 and 3.1.2)

All training simulators must be interoperable with existing air brake simulators, diagnostic scan tools and training documentation located at RCEMES. Such systems held by RCEMES include:

Truck Air Brake Trainers: Model # 20-A04-8659

Trailer Air Brake Trainers: Model # 21-AAA-7591

Meritor Wabco diagnostic software

Technical Evaluation Criteria

MANDATORY REQUIREMENTS

The Bidder's proposed equipment must meet the technical specifications detailed at Annex A. Proposals must be supported by proper documentation to support each mandatory requirement. Any proposals not meeting all of the mandatory requirements will be given no further consideration.

The Bidder must submit with their proposal at time of bid closing supporting technical documents such as: technical specifications, literature, brochures or other similar supporting documentation, which clearly demonstrates that the Bidder's proposed equipment meets each of the specifications at Annex A. This information will be used to verify compliance with Annex A. If any of the equipment specification is not identified in the Bidder's existing technical documents, the Bidder must address separately, in their proposal, how it meets that particular equipment specification.

		Identify where the supporting documentation is located in the bid package (Page number(s))
M1	Technical Specifications: Truck/Tractor	
1.1	Must be Canadian Motor Vehicle Safety Standard (CMVSS) 121 compliant	
1.2	Must display three axles	
1.3	Must be able to interface with diagnostic service tools, PC or hand held	
1.4	Must have a 120 AC power supply/12v converter with power "ON" indicator	
1.5	Must have a master control panel with wheel speed control	
1.6	Must have a fully functional ABS/ATC system with indicator lights	
1.7	Must include an ABS light relay	
1.8	Must utilize compressed air to operate	
1.9	Must include fully functioning ABS modulator valves with gauge (11 bar)	
1.10	Must include a mud/snow simulation switch	
1.11	Must include a low air indicator light	

		Identify where the supporting documentation is located in the bid package (Page number(s))
1.12	Must have a fully functioning park brake actuator and trailer supply valve	
1.13	Must have a trailer control valve	
1.14	Must have a working compressor governor	
1.15	Front brake chambers must be red in colour and include pressure gauges (7 bar)	
1.16	Rear brake chambers must be colour coded orange (emergency) and green (service)	
1.17	Must provide the user with real life system faults	
1.18	Must be equipped with a ¼ inch air line adapter	
1.19	Must have a working brake foot valve with micro adjustment	
1.20	Must include a forward, neutral and reverse switch	
1.21	All major components must be named on the trainer	
1.22	Must include an actual truck/tractor powertrain control module	
1.23	Electrical circuits must be fuse protected	
1.24	Supply tank must be colour coded blue	
1.25	Secondary must to be colour coded red	
1.26	Primary tank must be colour coded green	
1.27	Must include a secondary gauge (11 bar)	
1.28	Must include a primary gauge (11 bar)	

		Identify where the supporting documentation is located in the bid package (Page number(s))
1.29	Supply tank must incorporate a safety valve	
1.30	Must include a tractor protection valve	
1.31	Inter axle control valve must include a pressure gauge (11 bar)	
1.32	Must include a functioning reluctor wheel	
1.33	All wheels must have speed sensors	
1.34	Front Wheel speed sensors must be red	
1.35	Rear Wheel speed sensors must be green	
1.36	Must include realistic graphic representation integrated with working and nonworking reluctor wheels	
1.37	Must include working brake lights	
1.38	Must be equipped with a service air line and gland hand colour coded blue	
1.39	Must be equipped with an emergency brake air line and gland hand colour coded red	
1.40	Must incorporate a storage bracket for air lines and electrical connection when not connect to trailer	
1.41	Must provide the user with a J1585 data connector	
1.42	Must be mounted on heavy duty castors as described in 3.1.1. of Annex A	
1.43	Must be constructed to an overall size of 410 mm high, 445 mm long, 360 mm wide, with an allowable deviation of +/- 10% of all dimensions	
M2	Technical Specifications: Trailer	
2.1	Must be Canadian Motor Vehicle Safety Standard (CMVSS) 121 compliant	

		Identify where the supporting documentation is located in the bid package (Page number(s))
2.2	Must connect to and be operable by the truck/tractor air brake simulator	
2.3	Must include colour coded glad hand connectors	
2.4	Must have electrical connector for trailer lights	
2.5	Must include master control panel with wheel speed control	
2.6	All wheels must have speed sensors	
2.7	Trailer wheel speed sensors must be yellow	
2.8	Must have a working reductor wheel	
2.9	Must include realistic graphic representation integrated with working and nonworking reductor wheels	
2.10	Must utilize shop air through truck/tractor to operate	
2.11	Must have a 120 AC power supply/12v converter with power "ON" indicator	
2.12	Must include a trailer spring brake valve	
2.13	Must include two service/spring brake reservoirs (orange and blue) with 1,100 kPa gauges	
2.14	Must have blue colour coded service brake lines and yellow colour coded emergency spring brake lines	
2.15	Trailer brake chambers must be colour coded orange (emergency) and black (service)	
2.16	Must have a functioning ECU modulator assembly with pressure gauges (1,100 kPa)	
2.17	Must include functioning brake lights	

		Identify where the supporting documentation is located in the bid package (Page number(s))
2.18	Must incorporate an ABS warning light	
2.19	Must have a fully functional ABS/PLC system	
2.20	Must provide the user with real life system faults	
2.21	Must be able to interface with diagnostic service tools, PC or hand held	
2.22	Must provide the user with a J1585 data connector	
2.23	Must be constructed to an overall size of 410 mm high, 220 mm long, 360 mm wide, with an allowable deviation of +/- 10% of all dimension	
2.24	Must be mounted on heavy duty castors as described in 3.1.2. of Annex A	
2.25	Must be fully operable when connected to the truck simulator	
2.26	Electrical circuits must be fused protected	
M3	Additional Technical Specifications (for M1 and M2)	
3.1	Repair manuals must be supplied in both official languages	
3.2	The brake tubing must be colour coded to differentiate between the Supply System, the Primary System and the Secondary air systems.	
3.3	All air reservoirs must have drain valves	
3.4	The truck/tractor airbrake board must include a fully functional ABS/ATC system with the ability to insert a minimum of ten electrical faults for technician training purposes.	
3.5	The trailer airbrake board must have a fully functional ABS/PLC system with the ability to insert a minimum of five electrical faults for technician training purposes.	

M4	Performance Tasks (for M1 and M2)	
4.1	Instructors must be able to input faults electronically or mechanically	
4.2	Instructors must be able to operate and demonstrate as if in an actual vehicle	
4.3	Students must be able to perform enhanced manipulation of the trainer components	
4.4	Students must be able to diagnose and troubleshoot airbrake systems	
4.5	Students must be able to diagnose and troubleshoot the electrical/electronic system	
4.6	Students must be able to obtain electronic parameters using diagnostic equipment	
4.7	Students must be able to obtain technical data and information from the training simulators	
4.8	Students must be able to perform test procedures on the training simulators	
4.9	Students must be able to inspect and maintain components on the training simulators	
4.10	Students must be able to operate trainers as an actual vehicle	
M5	Performance Requirements (for M1 and M2)	
5.1	Users must be able to place training simulators in different locations as necessary.	
5.2	Users must have the ability to exercise test procedures as outlined in reference manuals and have the capability to use diagnostic test equipment.	
5.3	Users must have the authorization to change the name plates or decals in either official language as may be required in future use.	
5.4	Users must be able to manipulate and maintain components as required.	
M6	Operability (for M1 and M2)	
6.1	All training simulators must be interoperable with existing air brake simulators, diagnostic scan tools and training documentation located at RCEMES. Such systems held by RCEMES include:	

	Truck Air Brake Trainers: Model # 20-A04-8659 Trailer Air Brake Trainers: Model # 21-AAA-7591 Trailer Air Brake Trainers: Model # 21-AAA-7591 Meritor Wabco diagnostic software	
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