



National Defence

Défense nationale

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**REQUEST FOR INFORMATION  
DEMANDE DE  
RENSEIGNEMENTS**

**RETURN RESPONSES  
AND COMMENTS BY EMAIL TO:  
RETOURNER LES RÉPONSES  
ET COMMENTAIRES PAR COURRIEL A**

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Comments – Commentaires

**Issuing Office – Bureau de distribution**

Department of National Defence –  
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<b>Date of Solicitation – Date de l'invitation</b> 28 November 2019 – 28 Novembre 2019	
<b>Address Enquiries to – Adresser toutes questions à</b> Thomas Schubert Contracting Authority DLP 4-2-1-1 Department of National Defence Assistant Deputy Minister Materiel Director General Land Equipment Program Management 101 Colonel By Drive Ottawa, ON K1A 0K2 <a href="mailto:thomas.schubert@forces.gc.ca">thomas.schubert@forces.gc.ca</a>	
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<b>Destination</b> See herein Voir ici	

**Instructions: See Herein**

**Instructions: Voir Ici**

<b>Solicitation Closes – L'invitation prend fin</b>  At – à : 14 : 00 EST – 14h 00 HNE  On - le : 21 January 2020 / 21 Janvier 2020
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<b>Delivery required - Livraison exigée</b> See herein - Voir ici	<b>Delivery offered - Livraison proposée</b>
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Name/Nom _____	Title/Titre _____
Signature _____	Date _____

# **REQUEST FOR INFORMATION (RFI)**

## **EXAMINATION OF ORDNANCE, FIELD ARTILLERY**

### **FOR THE**

### **DEPARTMENT OF NATIONAL DEFENCE**

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## **1. Background and Purpose of this Request for Information (RFI)**

The Department of National Defence (DND) is looking to seek guidance from industry regarding the capability to perform the Examination of Ordnance.

Through this Request for Information (RFI), DND wishes to understand the methods, choice of equipment, support capacity, and overall feedback on how to best perform the Examination of Ordnance for the Canadian Armed Forces (CAF) field artillery fleets. Through this consultation, respondents would be expected to present their solutions to the tasks identified in the Statement of Work (SOW). This information may be used to create the Final SOW and the competitive Request for Proposal (RFP) in the near future.

DND's goal is to work with industry to identify the best way forward for a long-term scalable and supportable solution to Ordnance Examination.

## **2. Nature of Request for Information**

This is not a bid solicitation. The information provided by DND in this RFI is preliminary and may change. All potential respondents are encouraged to indicate their level of interest by responding to this RFI.

This RFI will not result in the award of any contract. Therefore, potential suppliers of any goods and/or services described in this RFI should not reserve stock or facilities, nor allocate resources, as a result of any information contained in this RFI. Also, the procurement of any of the goods and/or services described in this RFI will not necessarily follow this RFI. This RFI is simply intended to solicit feedback from industry with respect to the matters described in this RFI.

Responding to this RFI is not a prerequisite to receiving any resulting bid solicitation for this requirement. Nor will this RFI result in the creation of any source list. Therefore, whether or not any potential supplier responds to this RFI will not preclude that supplier from participating in any future procurement. The issuance of this RFI does not create an obligation for DND to issue any subsequent bid solicitation and does not bind DND, legally or otherwise, to enter into any agreement or to accept any suggestions from industry. DND reserves the right to accept or reject any or all comments received.

Potential respondents are advised that any information submitted to DND with regard to this RFI may be used by DND in the development of any subsequent bid solicitation.

This RFI must in no way be considered as authorization by DND for respondents to undertake any work which would result in costs to DND. DND will not be bound by anything stated herein. DND reserves the right to change, at any time, any or all parts of the requirement, as necessary.

## **3. Response Costs**

DND will not be liable for, nor will it reimburse respondents for any costs, fees or expenses incurred in the preparation or submission of responses to this RFI.

## **4. Nature and Format of Responses Requested**

Respondents are requested to provide their comments, concerns and, where applicable, alternative recommendations regarding how the requirements or objectives described in this RFI could be satisfied. Respondents are also invited to provide comments regarding the content, format and/or organization of any draft documents included in this RFI. Respondents should explain any assumptions they make in their responses.

## **5. Treatment of Responses**

### **5.1 Use of Responses**

Responses will not be formally evaluated. However, the responses received may be used by Canada to develop or modify procurement strategies or any draft documents contained in this RFI. Canada will review all responses received by the RFI closing date. Canada may, in its discretion, review responses received after the RFI closing date.

### **5.2 Review Team**

A review team composed of representatives from DND will review the responses. Canada reserves the right to hire any independent consultant, or use any Government resources that it considers necessary to review any response. Not all members of the review team will necessarily review all responses.

### **5.3 Confidentiality**

Respondents are requested to clearly identify any submitted information or mark any portion of their response that is to be considered as either company confidential or proprietary. The confidentiality of each respondent's response will be respected and maintained. Items that are identified as proprietary will be treated as such except where Canada determines that the enquiry is not of a proprietary nature.

### **5.4 Follow-up Activity**

Canada may, in its discretion, contact any respondents to follow up with additional questions or for clarification of any aspect of a response.

## **6. Contents of this RFI**

This RFI also contains:

- (a) a draft Statement of Work (SOW) for industry to review and comment on in Annex A;
- (b) specific questions addressed to the industry in Annex B – Table 1; and
- (c) an additional comments section that industry can complete, as needed, in Annex B – Table 2.
- (d) an Appendix 1 to Annex A - Requirement Specification for Examination of Ordnance Instruments.

## **7. Format of Responses**

### **7.1 Response Parameters**

There is no page limit on the information to be provided. Respondents are reminded that this is a RFI and not a RFP and, in that regard, respondents should feel free to provide their comments and/or concerns in addition to their responses. DND reserves the right to seek clarifications from respondents for any information provided in response to this RFI, either by telephone or in writing. Respondents are requested to respond to all questions posted in Annex B.

### **7.2 Numbering System**

Respondents are requested to prepare their response using a numbering system corresponding to the one in this RFI. All references to descriptive material, technical manuals and brochures included as part of the response should be referenced accordingly.

### **7.3 Language of Response**

Responses may be provided in English or in French.

### **7.4 Number of Copies**

Canada requests that respondents submit one (1) soft copy, in PDF format, of their response.

## **8. Enquiries**

Since this is not a bid solicitation, Canada will not necessarily respond to enquiries in writing nor circulate answers to all respondents. However, respondents with questions regarding this RFI may direct their enquiries to the following Contracting Authority:

Thomas Schubert  
Procurement Officer  
**Department of National Defence**  
Email address: [thomas.schubert@forces.gc.ca](mailto:thomas.schubert@forces.gc.ca)  
Telephone: 819-939-0938

## **9. Submission of Responses**

### **9.1 Time and Place for Submission of Responses**

Suppliers interested in providing a response to this RFI should send their response by email to the Contracting Authority identified above by the date and time indicated on Page 1 of this document.

### **9.2 Responsibility for Timely Delivery**

Each respondent is solely responsible for ensuring its response is delivered on time to the correct location.

### **9.3 Identification of Response**

Respondents must ensure that the RFI number is clearly indicated in the subject line of their email when sending their response. In addition, each respondent should ensure that the following information appears in their response:

- (a) the full legal name and address of the respondent;
- (b) the name, address, telephone number and email address of the respondent's contact person;
- (c) the date;
- (d) the RFI number; and
- (e) the title of the RFI.

## **Annex A – Draft Statement of Work**

### **1. SCOPE**

#### **1.1 Purpose**

The purpose of this Statement of Work (SOW) is to describe the requirements and work effort required from the contractor by the Department of National Defence (DND) for the supply of items and services to meet the requirements for the acquisition and support of Examination of Ordnance Special Instruments.

#### **1.2. Background**

The execution of an examination of ordnance is the responsibility of senior Weapons Technician (Land), MOS ID 00130. The examination of ordnance is performed on a periodic schedule in order to monitor and ensure the safe use of large calibre weapons systems used by the Canadian Army (CA). In the case of Small Arms (SA) like rifles and machine guns, an examination can be conducted on the complete weapon. For large calibre weapons systems like howitzers and mortars, an examination is conducted on the ordnance which includes a critical examination of the barrel or cannon tube.

The examination of ordnance requires special instruments in order to precisely measure the internal dimensions of the barrel or cannon tube bore in order to understand the current state of wear. It's also critical to perform a very close visual examination of the entire length of the bore to ensure there's no developing defects that would deem the barrel or cannon tube unsafe for use.

The current special instruments used for conducting the examination of ordnance for 105mm and 155mm howitzers, as well as 81mm mortars, are obsolete. The BG-20 and BG-280 series of measuring devices are no longer supported and the M3 borescope used for visual examination is outdated and is becoming very difficult to maintain. Traditionally, DASPM 3 has been the EMT responsible for the Examination of Ordnance procedure at Article 2.2 as well as the LCMM for the special instruments including the legacy BG-20 measuring device for 81mm SC 99-297-7343.

With the increased fielding of the 81mm mortar throughout the Canadian Army, supporting land workshops that have traditionally only performed examination of ordnance on howitzers now have the additional responsibility to perform examinations on 81mm mortars as well. It is becoming a pressing issue to acquire a common, up to date set of special instruments for the Weapons Technician (Land) that can be used to execute the examination of ordnance for 105mm, 155mm and 81mm cannon tubes and barrels.



### 1.3 List of Acronyms and Abbreviations

Abbreviation	Description
AVI	Audio Video Interleave
CA	Canadian Army
DASPM	Directorate Armament Sustainment Program Management
DND	Department of National Defence
DVR	Digital Video Recorder
EMT	Equipment Management Team
FOV	Field of View
fps	Frames per Second
Hz	Hertz
JPEG	Joint Photographic Experts Group
LCMM	Life Cycle Materiel Manager
LED	Light Emitting Diode
MOS ID	Military Occupational Structure Identification Code
R&O	Repair and Overhaul
RFP	Request For Proposal
SA	Small Arms
SD	Secure Digital
SOW	Statement of Work
USB	Universal Serial Bus
VAC	Volts Alternating Current

Table A-1 - List of Acronyms and Abbreviations

## 2. APPLICABLE DOCUMENTS

### 2.1. References

The following references are provided with the Request for Proposal, where mentioned, the following Standards must be used for the preparation of deliverables to the extent specified in the SOW

### 2.2. DND Specifications, Standards, and Publications

Reference	Promulgation	Reference Title
A-LM-184-001/JS-001	2016-01-30	Special Instructions for Repair and Overhaul Contractors
A-LM-007-100/AG-001	2016-11-30	Supply Administration Manual
D-02-002-001/SG-001	2003-04-01	Identification Marking of Canadian Military Property
C-71-020-044/NC-000	2012-06-01	Examination of Ordnance
C-71-020-008/NC-000	2012-06-01	Examination of Recoilless Rifles, Rocket Launchers and Mortars

Table A-2 - DND Specifications, Standards, and Publications

### 2.3. Order of Precedence

In the event of a conflict between the content in this SOW and the referenced documents, the content of this SOW takes precedence.

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### 3. GENERAL REQUIREMENTS

#### 3.1 Scope of Work

The contractor must supply the following quantities of instrument kits to support the examination of ordnance for the weapons systems listed. The specification requirements and options for the kits are in Appendix 1.

Quantity	Supported Weapons System
23 Kits	81mm and 105mm
20 Kits	81mm, 105mm and 155mm

*Table A-3 - Quantities of Instrument Kits*

#### 3.2. Tasks

The contractor must deliver the quantity and type of kits as outlined in Table A-3 as per the delivery schedule outlined in the contract.

The contractor must provide technical support and perform Repair and Overhaul (R&O) services for the instrument kits supplied at Table A-3 in accordance with the contract. A separate SOW for the R&O activity to support the instruments outlined in Table A-3 will be developed and issued with the RFP.

### 4. ACCEPTANCE PROCESS AND CRITERIA

#### 4.1. General

Acceptance requires that the Video Borescope specifications and the Measuring Device specifications outlined in Appendix 1 is met. Also, the quantity of kits to support specific weapons system outlined in Table A-3 has been produced and verified in accordance with all the requirements of the contract.

#### 4.2. Acceptance Inspection

The contractor must make available for inspection and acceptance by Canada at the contractors facility the Examination of Ordnance Special Instrument Kits outlined in Table A-3.

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## Annex B – Questions and Comments

### 1. Questions

Respondents are requested to respond to all or some of the questions in Table 1 below:

<b>TABLE 1 – RESPONSE TO QUESTIONS</b>		
<b>#</b>	<b>Question</b>	<b>Response</b>
1	Are you the Original Equipment Manufacturer (OEM) for the instruments you would offer to sell to DND?	
2	Do you own complete Intellectual Property (IP) rights for the instruments you would offer to sell DND?	
3	Do you own patents or other rights to the instruments you would offer to sell DND?	
4	Are you a licenced distributor for the instruments you would offer to sell to DND?	
5	When it comes to the repair of the instruments, do you have an authorized or a licensed repair facility for the instruments?	
6	Are you able to provide certain repair parts to DND so that DND technicians could perform common repairs to the instruments?	
7	Are you authorized or licensed to provide any other technical support to DND for the instruments?	
8	Would you be willing to provide technical support including repairs to the instruments for 10-15 years?	
9	Is there anything in the attached Draft Statement of Work at Annex A that would preclude you from bidding?  If so, can you tell us what it is and explain why it would preclude you from bidding?	

## 2. Comments

Please identify any other issues, concerns, recommendations not addressed above, including any feedback you wish to provide on the Draft Statement of Work at Annex A in Table 2 below:

<b>TABLE 2 – ADDITIONAL COMMENTS</b>		
<b>#</b>	<b>Subject</b>	<b>Comment</b>
1		
2		
3		
4		
5		

## **Appendix 1 - Requirement Specification for Examination of Ordnance Instruments**

### **1. GENERAL**

- 1.1. The specifications for the Examination of Ordnance kits are broken down into two (2) separate main specifications, these are:
  - 1.1.2. Video Borescope; and
  - 1.1.3. Measuring Device.
- 1.2. As a kit, the instrument hardware can be delivered as an integrated system which incorporates both a suitable video borescope as well as a suitable measuring device. The kit can also be delivered as a separate suitable video borescope kit; plus, a separate suitable measuring device kit.
- 1.3. For documentation, the examination of ordnance instrument kits must have a user manual(s) that includes the following features:
  - 1.3.1. Must explain the use of all the video borescope and measuring device features.
  - 1.3.2. Must have clear instructions on the use of the video borescope and measuring device.
  - 1.3.3. Must have clear instructions on the user care of the video borescope and measuring device.
  - 1.3.4. Must be written in both English and French.
  - 1.3.5. An electronic .PDF version of the user manual(s) must be included so it can be printed out.

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## **2. VIDEO BORESCOPE SPECIFICATION**

- 2.1 Must have capability to inspect, 81mm, 105mm and 155mm diameter mortar barrels and cannon tubes.
- 2.2 Must have single person operation capability.
- 2.3 Must be weather resistant.
- 2.4 Must have a waterproof case.
- 2.5 Must have minimum 17 ft. push-pole with engraved or printed graduations to precisely locate borescope insertion. Must be capable to use in tight spaces. Push-pole can be telescopic or assembled in sections or be flexible.
- 2.6 Borescope system must be self-powered by rechargeable batteries and have an AC adapter option for 110-240 VAC, 50-60 Hz. Adapter for NATO slave receptacle is optional.
- 2.7 Must have battery status indicator.
- 2.8 Must have a forward looking camera as well as a side looking camera.
- 2.9 Must have capability for precise camera orientation.
- 2.10 Cameras must have minimum of 70° FOV.
- 2.11 Camera images must be colour with a minimum of 640 X 480 pixels.
- 2.12 White balance, gain, exposure can be Auto or Manual.
- 2.13 Camera must have remote focus for side mounted camera. Front mounted camera may have remote focus or fixed focus.
- 2.14 Must have integral Digital Video Recorder (DVR) and solid state storage capability for video files and digital photo files.
- 2.15 Must have digital photo capture and video recording and playback capability. Minimum standard is:
  - 2.15.1 Video - AVI format at 680 X 480 and up to 30 fps; and
  - 2.15.2 Photo - JPEG format at 680 X 480.
- 2.16 DVR must incorporate removable SD flash card media to store digital files or have USB port for data transfer to digital flash drives.
- 2.17 Must have bright white LED illumination with intensity control for both front and side cameras.
- 2.18 Borescope system must incorporate a digital video monitor so operator can view video feed from borescope.
- 2.19. Other optional desirable specifications for the video borescope are as follows:
  - 2.19.1 Cameras that have 90° FOV or greater;

- 2.19.2 Photo and video resolution of 1024 X 768 pixels or greater;
- 2.19.3 Capability for optional Ultra Violet (UV) illumination; and
- 2.19.4 Capability to measure the size of defects.

### **3. MEASUREING DEVICE SPECIFICATION**

- 3.1 Must have capability to inspect, 81mm, 105mm and 155mm mortar barrels and cannon tubes.
- 3.2 Must have single person operation capability.
- 3.3 Must be weather resistant.
- 3.4 Must have a waterproof case.
- 3.5 Must have minimum 17 ft. push-pole with engraved or printed graduations to precisely locate measuring head insertion. Must be capable to use in tight spaces. Push-pole can be telescopic or assembled in sections or be flexible.
- 3.6 Measuring device system must be self-powered by rechargeable batteries and have an AC adapter option for 110-240 VAC, 50-60 Hz. Adapter for NATO slave receptacle is optional.
- 3.7 Must have battery status indicator.
- 3.8 Must precisely measure bore diameters to +/- .001", (+/- .025mm)
- 3.9 Must have measuring heads and calibration rings available for 81mm, 105mm and 155mm.
- 3.10 Measuring distance on measuring heads must have minimum 4mm travel.
- 3.11 Must have capability for precise orientation of measuring head.
- 3.12 Measuring device must have capability for data storage for multiple measurements.
- 3.13 Must have integral digital display that shows actual measurements taken.
- 3.14 Measuring device must incorporate removable SD flash card media to store digital files or have USB port for data transfer to digital flash drives so measurement files can be printed out.