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- PWGSC
1550, Avenue d'Estimauville
1550, D'Estimauville Avenue
Québec
Québec
G1J 0C7

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
TPSGC/PWGSC
601-1550, Avenue d'Estimauville
Québec
Québec
G1J 0C7

Title - Sujet Winterizing F.G. Creed - 2014		
Solicitation No. - N° de l'invitation F3084-14N570/A		Amendment No. - N° modif. 002
Client Reference No. - N° de référence du client F3084-14-N570		Date 2014-10-09
GETS Reference No. - N° de référence de SEAG PW-\$QCL-037-16095		
File No. - N° de dossier QCL-4-37150 (037)		CCC No./N° CCC - FMS No./N° VME
Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2014-10-20		Time Zone Fuseau horaire Heure Avancée de l'Est HAE
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: Woods, Michael		Buyer Id - Id de l'acheteur qcl037
Telephone No. - N° de téléphone (418) 649-2715 ()		FAX No. - N° de FAX (418) 648-2209
Destination - of Goods, Services, and Construction: Destination - des biens, services et construction:		

Instructions: See Herein

Instructions: Voir aux présentes

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

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CCC No./N° CCC - FMS No/ N° VME

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Please amend the above mentioned bidding solicitation with the changes below:

At all locations in the above mentioned bidding solicitation that SACC 2030 (2014-06-24) General Conditions – Higher Complexity – Goods is used:

Delete: 2014-06-24

Replace with: 2014-09-25

At Part 2.7 – Work Period

Remove:

Winterizing Start date: 27th October, 2014.
Work Start date: 03rd November, 2014.
Work End date: 28th November, 2014.
Winterizing End date: 20th April, 2015.

Replace with the following:

Winterizing Start date: 27th October, 2014.
Work Start date: 03rd March, 2015.
Work End date: 27th March, 2015.
Winterizing End date: 20th April, 2015.

At Part 7.4.1 – Work Period

Remove:

Winterizing Start date: 27th October, 2014.
Work Start date: 03rd November, 2014.
Work End date: 28th November, 2014.
Winterizing End date: 20th April, 2015.

Replace with the following:

Winterizing Start date: 27th October, 2014.
Work Start date: 03rd March, 2015.
Work End date: 27th March, 2015.
Winterizing End date: 20th April, 2015.

Remove Annex A – 'Winter storage specifications'

Replace with the attached Annex A – 'Winter storage specifications rev. 001' which contains item H.D.4.7.8 Repairs and maintenance on Detroit Diesel Propulsion Engines.

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At Annex I - Financial Bid Presentation Sheet

Remove:

Annex I - Financial Bid Presentation Sheet

Replace with the following:

Annex I - Financial Bid Presentation Sheet

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ANNEX I

Financial Bid Presentation Sheet

I0 Proposed Docking Facility Location: _____

I1 Price for Evaluation

A)	Known Work For work as stated in Part 1 Clause 2a, Specified in Annex "A" and detailed in the attached Pricing Data Sheets Appendix 1 of Annex "I", for a FIRM PRICE of:	\$ _____
B)	Unscheduled Work Contractor Labour Cost: Estimated labour hours at a firm <i>hourly Charge-out Labour Rate</i> , including overhead and profit for evaluation purpose only: 350 person hours X \$ _____ per hour for a PRICE of: See Note I2.1 and I2.2 below.	\$ _____
C)	Daily Service Fees for evaluation purpose only As per Clause I4 i) Twenty (20) working days X \$ _____ firm daily service fee = \$ _____; plus ii) Eight (8) non-working days X \$ _____ firm daily service fee = \$ _____	\$ _____
D)	Vessel Transfer Cost As per Note I6:	\$ _____
F)	EVALUATION PRICE GST Excluded, [A + B + C + D]: For an EVALUATION PRICE of:	\$ _____

I2 Unscheduled Work

The Contractor will be paid for unscheduled work arising, as authorized by the Minister, calculated in the following manner:

"Number of hours (to be negotiated) X \$ _____ your firm *hourly Charge-out Labour Rate* which includes *Overhead* and profit, plus net laid-down cost of materials to which shall be added a 10% mark-up, plus Goods and Services Tax or Harmonized Sales Tax as applicable, of the total cost of material and labour. The firm *hourly Charge-out Labour Rate* and the material mark-up will remain firm for the duration of the Contract and any subsequent amendments thereto."

I2.1: Notwithstanding definitions or useage elsewhere in this document, or in the Bidder's Cost Management System, when negotiating *Hours* for unscheduled work, PWGSC will consider only those hours of labour directly involved in the production of the subject work package.

Elements of Related Labour Costs identified in I2.2 below, will not be negotiated, but will be compensated for in accordance with paragraph I2.2. It is therefore incumbent upon the Bidder to enter values in the above table which will result in fair compensation, regardless of the structure of their Cost Management System.

I2.2: Allowance for *Related Labour Costs* such as: Management, Direct Supervision, Purchasing and Material Handling, Quality Assurance and Reporting, First Aid, Gas Free

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Inspecting and Reporting, and Estimating will be included as *Overhead* for the purposes of determining the *Charge-out Labour Rate* entered in line I2 above.

I2.3: The 10% mark-up rate for materials will also apply to subcontracted costs. The mark-up rate includes any allowance for material and subcontract management not allowed for in the Chargeout Labour Rate. The Contractor will not be entitled to a separate labour component for the purchase and handling of materials or subcontract administration.

I3 Overtime

No overtime work shall be compensated for under the Contract unless authorized in advance and in writing by the Contracting Authority. Any request for payment must be accompanied by a copy of the overtime authorization and a report containing such details as Canada may require with respect to the overtime work performed. Compensation for authorized overtime will be calculated in the following manner:

- a. For Known Work, the Contractor will be paid the original contract price plus agreed overtime hours paid at the following premium rates; or,
- b. For Unscheduled Work, the Contractor will be paid for agreed overtime hours paid at the quoted *Charge-out Labour Rate* plus the following premium rates:

Premium For Time and one half: \$ _____ per hour; or,

Premium For Double time: \$ _____ per hour

Premium for time and one half:

$\frac{1}{2}$ (that portion of the firm Hourly Charge-out Labour Rate in I2 that is directly attributable to salary cost plus related certified fringe benefits) times 7.5% (representing profit)

Premium for double time:

(that portion of the Unscheduled Work firm Charge-out Labour Rate in I2 that is directly attributable to salary cost plus related certified fringe benefits) times 7.5% (representing profit)

These premiums will remain firm for the duration of the Contract, including all amendments and are subject to audit by Canada, and to retroactive adjustment under the Contract if Canada discovers that the premiums have not been calculated in accordance with the formulae, above.

I4 Daily Services Fee

In the event of a delay in the performance of the Work that lengthens the Work Period beyond the date specified in this Contract,, and if such delay is recognized and agreed upon by the Contracting Authority as being attributable to Canada, Canada agrees to pay the Contractor the daily services fee, described below, for each day of such delay. This fee shall be the sole liability of Canada to the Contractor for the delay.

The firm daily services fee is:

(a) For a working day: \$ _____

(b) For a non-working day: \$ _____

The above fees shall include but not be limited to, all aspects of the following costs: Administrative Support, Production Services, Quality Assurance, Material Support, Planned Maintenance and Ship

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Services, and all other resources and direct costs needed to maintain the Vessel at the Contractor's facility including all items listed in **I5**. These fees are firm and not subject to any additional charges for mark-up or profit.

I5 Cost of all Services is Included in Contract Price

All charges, fees expenses and disbursements incidental to the carrying out of the Work, including all items described in Supplemental General Conditions 1029 (2010-08-16) Ship Repair, section (07), are included in the Evaluation Price for the Work, including, without limitation:

1. **Services:** include all costs for ship services such as water, steam, electricity, etc., required for vessel maintenance for the duration of the Contract.
2. **Docking and Undocking** include:
 - (a) all costs resulting from drydocking, wharfage, security, shoring, shifting and/or moving of the vessel within the successful Bidder's facility;
 - (b) the cost of services to tie up the vessel alongside and to cast off.

Unless specified otherwise, the vessel will be delivered by Canada to the successful Bidder's facility alongside a mutually agreed safe transfer point, afloat and upright, and the successful Bidder will do the same when the Work is completed.

3. **Field Service Representatives/Supervisory Services:** include all costs for field service representatives/supervisory services including manufacturers' representatives, engineers, etc.
4. **Removals:** include all costs for removals necessary to carry out the Work and will be the responsibility of the Contractor whether or not they are identified in the specifications, except those removals not apparent when viewing the vessel or examining the drawings. The successful Bidder will also be responsible for safe storage of removed items and reinstalling them on completion of the Work. The successful Bidder will be responsible for renewal of components damaged during removal.
5. **Sheltering, Staging, Cranage and Transportation:** include the cost of all sheltering, staging including handrails, cranage and transportation to carry out the Work as specified.

The successful Bidder will be responsible for the cost of any necessary modification of these facilities to meet applicable safety regulations.

I6 Vessel Transfer Costs

1. The Evaluation Price shall include the cost for transferring the vessel from its home port to the shipyard/ship repair facility where the majority of the Work will be undertaken and the cost of returning the vessels to their home port following completion of the Work, in accordance with the following:
 - (a) The bidder shall enter on Line **I0**, the location of the shipyard/ship repair facility where it proposes to undertake the Work. The applicable vessels' transfer costs provided under section 3. of this clause shall be entered into table I1.
 - (b) Should the list in section 3. of this clause not provide the shipyard/ship repair location where the bidder intends to undertake the Work, then the bidder must advise the Contracting Authority, in writing, no later than **five calendar days** prior to the bid closing date, of its proposed location for undertaking the Work. The Contracting Authority will acknowledge to

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the bidder, in writing, no later than **three calendar** days prior to the bid closing date, the location of the shipyard/ship repair and confirm the applicable vessel transfer cost.

A Bid that specifies a location for undertaking the Work which is not in the list under section 3. of this clause, and for which a notification in writing has not been received by the Contracting Authority five days prior to the bid closing date, shall be deemed to be non-responsive.

2. Transfer costs, in this case, are based on using a government delivery crew and include the fuel cost at the vessel's most economical speed of transit and crew transportation costs for the delivery crew based on the location of the vessel's home port and the shipyard/ship repair facility.
3. Round trip transfer costs applicable to the following facilities are:

Company	City	Transfer Cost
Davie Industries Inc.	Lévis, QC	\$2,991.00
Oceans Industries Inc.	Île-aux-Coudres, Qc	\$1,901.00
Verreault Navigation Inc.	Les Méchins,Qc	\$1,485.00
Méridien Maritime	Matane, Qc	\$4,021.00
Chantier Forillon	Gaspé, Qc	\$4,318.00

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Appendix 1 of Annex I

PRICING DATA SHEET		
Item	Description	Firm Price
H.D.-1	TOWAGE, BLOCKING AND REFLOATING	\$ _____
H.D.-2	SERVICES	\$ _____
	2.1 Shore Power (10 000 KWh) Connect/Disconnect fees: \$ _____ Unit price per KWh: \$ _____ Gangway: \$ _____	
	2.3 Vessel's custody	
	2.5 Provide 10 hours of crane service (including fees; labourer, signaler, signalman, etc.) Hourly rate _____ \$ / hour X 10 hours	
	2.6 Snow removal	
	2.7 Fire Hose	
	2.8 Garbage disposal	
	2.9 Drains	
	2.10 Handling and moving services (winch & gantry)	
	2.11 Parking spots	
	2.12 Telephone line	
H.D.-4	MISCELLANEOUS WORK	\$ _____
	4.1 Vessel cleaning	
	4.2 Sea suction	
	4.3 Anode inspection and replacement	
	Price for each anodes: Length x Width x Thickness (shape) = Price/Each. 6 in x 11 in x 1 in (rectangle) = _____ \$/ Each 5,5 in x 2,5 in x 1 in (rectangle) = _____ \$/ Each 5,5 in x 2,5 in (fish) = _____ \$/ Each 5 in x 1,25 in x 1 in (rectangle) = _____ \$/ Each 5 in x 11 in x 1 in (rectangle) = _____ \$/ Each (Ballast anode for information only, as this is not included in the specs)	
	Price to inspect Port side exterior anodes (as per anodes list)	
	Price to inspect Port side interior anodes (as per anodes list)	
	Price to inspect Starboard side exterior anodes (as per anodes list)	
	Price to inspect Starboard side interior anodes (as per anodes list)	
	4.4 Wall repairs	
	4.5 Fire extinguishing systems	
	4.6 Liferafts	
	4.7 Aluminum repairs	
	4.7.1 Fire station repairs	
	4.7.2 Starboard outer bulwark	
	4.7.3 Day Tank Repairs	
	4.7.4 Rudder (port)	
	4.7.5 Modification of bollards	
	4.7.6 Black water tank suction pipeline	

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	4.7.7 Pinholes repair, in aluminum		
	4.7.7.1 Tank top	\$ _____	
	4.7.7.2 Engine room bilges	\$ _____	
	4.7.8 Repairs and maintenance on Detroit Diesel Propulsion Engines.		
	4.7.8.1 Starboard engine		
	Unit price for cylinder head: \$ _____		
	Unit price for piston and connecting rod assemblies: \$ _____		
	Unit price for cylinder liner: \$ _____		
	Unit price for refurbished turbo: \$ _____	\$ _____	
	4.7.8.2 Port engine	\$ _____	
			\$ _____
(A) SCHEDULED WORK – TOTAL FIRM PRICE			\$ _____

All other clauses and conditions from the bidding solicitation remain the same.

CCGS FREDERICK G. Creed

Order no. F3084-14IN570

"Winter storage specifications

rev.001"

Winter 2014-2015

October 8th, 2014

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H.D.-1	TOWAGE, BLOCKING AND REFLOATING
H.D.-2	SERVICES
H.D.-3	INSPECTIONS AND ADDITIONAL WORK
H.D.-4	MISCELLANEOUS WORK

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2014-2015

Attached plans and documents:

176-DCK_2	Docking plan
65-B1	Construction profile
65-C8	Shaft Line/Ligne d'arbre
65-d1_1	Ligthing and switch plan
176-100-1	accomodation
176-B	Ducking plan Bâbord
176-T	Ducking plan tribord version 2013
65-A5	Safran/Rudder
02604-20	INCENDIE/Fire
02604-10	Rescue Equipment/Équipement de sauvetage
Radeaux	Life raft last certificate/Certificat des radeaux de sauvetage
Photos/Pictures	Divers pour réparations/ Various repairs
Liste des anodes /	Anodes list
Liste d'extincteurs /	Extinguishers list Spécification
	Belzona 1111 mode d'emploi
Spécification	Rev15_9-13 paper FR_Amercoat 240

VESSEL CHARACTERISTICS

Type:	SWAT
Construction:	Aluminium
Length overall:	20.42 meters
Width at midship beam:	9.45 meters
Maximum draft:	2.74 meters
Maximum displacement:	70 tonnes

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STATEMENT OF REQUIREMENTS

H.D.-1 TOWAGE, BLOCKING AND REFLOATING

HD.-1.1 The shipyard shall provide the labour, materials and equipment required for blocking and towing the vessel on as stated in the contract, as well as for dry-docking.

HD.-1.2 Ensure depth sounder or transducer plates on the port and starboard hull are not against the keel blocks.

H.D.-1.3 The vessel shall be stored in the shipyard in a way that it can be launched on the date stated in the bid solicitation (to be confirmed), ice conditions permitting. The contractor shall provide a location at a secure dock after the vessel is launched so that the crew may conduct inspections and tests, obtain certifications and make the vessel operational.

H.D.-2 SERVICES

H.D.-2.1 Provide the equipment (electrical wire) and labour to connect and disconnect a 220 VAC, single-phase 100 A-capacity power supply. Provide a price for an estimated total power consumption of 10,000 kWh. The electricity costs will be increased or decreased on form PWGSC-TPSGC 1379.
- For the entire duration of the vessel's winter storage, the vessel (accommodations, the two (2) engine rooms and wheelhouse) shall be heated according to the CCG's requirements. Provide and install a gangway with a safety net for the entire winter storage period.

H.D.-2.2 The contractor shall be responsible for the vessel while it is in winter storage. The shipyard shall authorize the CCG and certain contractors to work onboard the vessel while it is in winter storage. This includes, among others:
- **Two (2)** CCG mechanics and one electrician who will carry out maintenance and repairs; and
- DFO electronic technicians.

H.D.-2.3 The shipyard shall be responsible for conducting daily onboard security rounds at the end of the day for the entire dry-dock period in addition to responding to surveillance system alarms. The contractor shall provide a report to the corresponding CCG employee for each alarm response. Everything will be recorded in a register by the shipyard and delivered to the representative of the CCG at the delivery of the vessel. Include **five (5)** visits for alarm in the contract.

H.D.-2.4 Provide an hourly rate, should the CCG want to proceed with certain work.

H.D.-2.5 Provide an hourly rate for crane use, including all required personnel, to transfer parts onboard the ship for the CCG's use. Include **ten (10)** hours in the contract. Provide an hourly rate for the service of a crane, including all personnel necessary for the transfer of components on board the vessel for the purposes of the Coast Guard, including **ten (10)** hours in the contract. Get permission (signature, email, or other) of the CCG representative for each application and record it in a register to be submitted to the CCG at the end of the contract documents.

H.D.-2.6 Provide snow-removal services so that CCG staff and various contractors continue to have access to the vessel.

H.D.-2.7 Install a non-pressurized fire hose that is ready to use at all times with the necessary hose lengths.

H.D.-2.8 Provide a garbage container placed near the vessel for waste from the vessel and empty it as needed during the dry-dock period.

H.D.-2.9 Provide and install piping under the vessel to collect waste water.

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H.D.-2.10 Provide handling and manoeuvring services to unload the winch and gantry from the vessel and provide a safe location to store them during the vessel's winter storage.

H.D.-2.11 Provide **two (2)** parking spots for staff working onboard the vessel while it is in winter storage.

H.D.-2.12 **Provide a telephone line connected to the ship**

H.D.-3 INSPECTION AND ADDITIONAL WORK

All additional work not described in these specifications shall be negotiated on form PWGSC-TPSGC 1379. The work description will be prepared by the CCG representative, and negotiations will then take place with PWGSC in order to obtain a reasonable fixed price before the work begins.

H.D.-4 MISCELLANEOUS WORK

H.D.-4.1 Vessel cleaning

Once the vessel is out of the water, clean the lower hull, rudders and canards using water jets from pressure washing machine.

H.D.-4.2 Sea suction

Remove sea suction screens, clean cavities, inspect and change anodes if needed* and return screens.

H.D.-4.3 Anodes

Inspect anodes, replace if needed. Provide a price list (Ref. Liste des anodes CCGS FREDERICK G. CREED). Put back screens in place. Claim parts needed according to H. D.-3

H.D.-4.4 Commanding officer room

H.D.-4.4.1 Wall repairs

The common wall with the bathroom will be fully opened to conduct an inspection following a water infiltration. The insulation material (mineral wool) will be removed and disposed of as standards. The interior wall and cover material will be cleaned with a product to stop the mold. The wall will be raised up with fresh mineral wool provided by the contractor with the original cover..

H.D.-4.5 Fire extinguishing systems

Hire a certified company to inspect and certify the vessel's fixed and portable (extinguishers) fire extinguishing systems.

H.D.-4.6 Liferafts

Unload the two (2) liferafts and send them to a certified firm for annual recertification. Load the two (2) liferafts back onto the vessel when it is operational again.

H.D.-4.7 Aluminium repairs:

Note: The work must be done under the Standard **CSA W47.2** and **CSA W59.2**. Perform a penetration test to confirm the welding integrity on all repairs.

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D.H.-4.7.1 Fire station

Perform repairs by fixing with a weld a two (2) inch crack in a niche of a fire station forward starboard outside. Include work to allow access (coating and insulation) and resettlement and finish. Apply the paint system H.D.-4.7.5. Pictures :Niche a.JPG , Niche b.JPG et Niche C.JPG

H.D.-4.7.2 Perform repairs by fixing with a weld a four (4) inch crack in the outer starboard bulwark. Include work to allow access (coating and insulation) and resettlement; apply the paint system of H.D.-4.7.5. Picture : Pavois.JPG

H.D.-4.7.3 Repair day tank (DT) Port

Crack repair from the inside:

The day tank (DT) is located at # 11 member embedded in the bulkhead between the aft fuel tank (AFT) and the main engine compartment. To access the interior DT, the Contractor shall go through the AFT. The AFT Must be emptied, degas and clean, and obtain a certificate of purity of the air inside to the standards that apply. From inside the AFT cut a hold on the DT ten inches hole (size depending provide cover available), clean the degas tank and obtain a certificate of purity of the air inside by the standards that apply..Proceed to repair cracks from inside the DT.

Crack repair from outside:

Proceed to repair a crack on the DT accessible from inside the engine room.

Installing an access cover on the hole provided on the DT from inside the AFT. Test the tank to insure the integrity to the satisfaction of the TC. Apply the paint system of H.D.-4.7.5

H, D.-4.7.4 Rudder port

Change the bottom bushing gudgeon on port side rudder. Adjust gap following specs on DMG 65-A5 Safran.

H.D.-4.7.5 Modification of bollards. Pictures : Bite a.jpg , Bite b.jpg et Bite c.jpg

Change the height of ten (10) bollards to 5 " 1/2 (inches) such as those located in front of the ship. Clean and prepare the new metal for painting, deliver and apply:

1st primer INTERGARD 264, red oxide, FPL274/FCA321, 8 mils dry film thickness on all unpainted surfaces.

Apply two full layers of 100% of the area, thereafter paint INTERTHANE 990 white RAL 9003, 2 dry mils per coat.

Care should be taken to obtain a clear separation from the bridge.

HD-4.7.6 Suction pipeline for receiving black water tank

Provide material and labor to manufacture and install an aluminum 1" ½ (inches) suction pipeline diameter from an existing suction on the receiving black water tank with the help of a T fitting to the outer main deck starboard. The quality of the installation have to be the same standard as the suction treatment tank pipeline. The pipe should be removable near the tank and finish with a male fitting and a dust cap CameLock at a height of 30" (inches) on main deck. The pipe with a total length of approximately 10 '(feet) must be adequately supported at regular intervals to ensure its integrity. A test shall be performed to demonstrate its seal.

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H.D-4.7.7 Pinholes repair, in aluminum (ref. Piqures.pdf)

H.D. -4.7.7.1 On tank top

Between frames 10 & 20 in the bilge, on tank top, over a width of twenty (20) inches, for an area of nine (9) square feet in the port and starboard hull. Perform manual sanding to the SA2 standard. Apply the product "Belzona" According to the manufacturer's specifications (ref. Belzona 1111 mode d'emploi) on the affected areas of pitting. Proceed to the sanding of the treated surfaces. Apply the following painting system:

A layer Amercoat 240 (Grey) 6-10 mils dry. According to the manufacturer's specifications (ref. Rev15_9-13 paper FR_Amercoat 240)

H.D.-4.7.7.2 In engines room bilges

Between frames 16 & 17 in the bilges of the main engines compartments. On a width of thirty-six (36) inches, for a surface area of about eight (8) square feet, in the port and starboard hull. Perform manual sanding to an SA2 standard. Apply the product Belzona 1111 according to the manufacturer's specifications (ref. Belzona 1111 mode d'emploi) on the affected areas of pitting. Proceed to the sanding of the treated surfaces. Apply the following system of painting. A layer Amercoat 240 (Grey) 6-10 mils dry. According to the manufacturer's specifications (ref. Rev15_9-13 paper FR_Amercoat 240)

H.D.-4.7.8 Repairs and maintenance on Detroit Diesel Propulsion Engines.

All work carried out on the Detroit Diesel Propulsion Engines shall be done by a 'Detroit Diesel Corporation' recognized and certified company to carry out repairs and maintenance on Detroit Diesel engines.

H.D.-4.7.8.1 Starboard engine

Obtain the services of a certified company to carry out repairs on the starboard propulsion diesel engine. Detroit Diesel Model: 12V92 TA, Serial Number: 003743 12VF.

Provide tools, equipment and labour to change damaged cylinder liner #10, (1) cylinder head, (1) piston, (1) connecting rod and (1) turbo.

Prepare the engine for the repairs. Empty the engine oil and the coolant.

On the right side of the engine (outboard), remove the turbo. On the three rear cylinders (8-10-12), remove the air intake and exhaust manifolds, probes, fuel racks and fuel lines to liberate the cylinder head. Dismantle the cylinder head and inspect the inside of the cylinders provide a status report with pictures.

Remove the oil pan and proceed to removing connecting rod caps, pistons and connecting rods, on cylinder #10. Remove cylinder liner #10. Inspect the inside of the engine block and providing a status report with pictures.

Proceed to the cleaning of the components that will be reused.

Remove the access doors of the other cylinders, inspect inside the cylinders, note any abnormalities. Provide a report on the state of the components. If repairs are necessary, they will be negotiated by using form PWGSC 1379.

Transfer the two good injectors on the new cylinder head and supply a rebuilt injector to replace the damaged one. Reassemble the engine with new gaskets and OEM (original equipment manufacturer) rebuild or new spare parts, including, a complete cylinder head, cylinder liner, piston and connecting rod assemblies. Reinstall air intake and exhaust manifolds, refurbished turbo and accessories. Use new or refurbished OEM parts.

Provide the necessary liquid for filling and leveling coolant and lubrication oil.

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Prepare the engine to start. Start the engine and conduct a review of the whole.

H.D.-4.7.8.2 Port engine

Perform an inspection to find a faulty injector and to replace it when found.