STATEMENT

OF

WORK

(SOW)

FOR THE REBUILD OF THE

CUMMINS VT-400 ENGINE

CRANKSHAFT OR CRANKSHAFT ASSEMBLY

FOR THE AAV

NSN 2815-01-123-2495

NSN 2815-01-108-5384

SOW-02-834-8B334B-1/2

Dated 29 November 2000

STATEMENT OF WORK FOR THE REBUILD OF THE VT 400 ENGINE CRANKSHAFTS OR CRANKSHAFT ASSEMBLY FOR THE AAV NSN 2815-01-123-2495 AND NSN 2815-01-108-5384

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STATEMENT OF WORK FOR THE REBUILD OF THE VT 400 ENGINE CRANKSHAFTS OR CRANKSHAFT ASSEMBLY FOR THE AAV NSN 2815-01-123-2495 AND NSN 2815-01-108-5384

1.0 SCOPE. This Statement of Work (SOW), along with RS-88643B-50/2 Draft establishes and sets forth tasks and identifies the work efforts that shall be performed for the rebuild of the VT-400 Engine Crankshafts or Crankshaft Assembly of the Assault Amphibious Vehicle (AAV). This document contains minimum requirements to restore the VT-400 Engine Crankshafts or Crankshaft Assembly of the AAV, hereafter referred to Crankshafts or Crankshaft Assembly, to Condition Code "A". Condition Code "A" is defined as "serviceable/issuable without qualification, new, used, repaired or reconditioned materiel which is serviceable and issuable to all customers without limitations or restrictions". The Crankshafts are identified by National Stock Number 2815-01-123-2495 and 2815-01-108-5384.

INFORMATION ON THE CRANKSHAFT REBUILDING (***Note***) This information is extracted from CUMMINS ALTERNATE REPAIR MANUAL 3379035 and incorporated into RS-88643B-50/2 Draft. This is a final draft copy dated June 1985 and is awaiting final approval. This publication is being used in depot facilities to rebuild the VT 400 CUMMINS ENGINE CRANKSHAFTS.

1.1 BACKGROUND. Rebuild is defined as that maintenance technique to restore an item to a standard as near as possible to original or new condition in appearance, performance, and life expectancy. This is accomplished through disassembly of the item, inspection of all parts or components, repair or replacement of worn or unserviceable parts using original manufacturing tolerances and/or specifications and subsequent reassembly of the item.

2.0 APPLICABLE DOCUMENTS. The following documents form a part of this SOW to the extent specified. Unless otherwise specified, the issues of these documents are those listed in the Department of Defense Index of Specifications and Standards (DoDISS) and supplement thereto which is in effect on the date of solicitation. In the event of conflict between the documents referenced herein and the contents of this SOW, the contents of this SOW shall be the superseding requirement.

2.1 Military Standards

MIL-STD-2073-1D	DoD Standard Practice for Military Packaging
MIL-STD-129	DoD Standard Practice for Military Marking

2.2 Other Government Documents and Publications

DoD 4160.21-M	Defense Disposition Manual
DoD 4000.25-1-M	MILSTRIP Manual
NAVICPINST 4491.2A	Requisitioning of Contractor Furnished Materiel from the Federal Supply System

TM 2350-45	DMA Standard Procedures
3379035	Cummins Technical Manual Alternate Repair Manual
R/S 88643B-50/2 Draft	CRANKSHAFT ASSEMBLY

Rebuilt description	Page 1
Special equipment requirements	Page 2
Illustrations/parts breakdown	Page 3
Disassemble	Page 5
Cleaning of Parts	Page 5
Inspection of parts	Page 7
Special procedures	Page 11
Finishing	Page 17

(1) A speedy sleeve may be used to bring the main oil seat (journal) to specifications

Assembly	Page 17

(1) When required to make an assembly

Markings	Page 17
Final inspection and acceptance	Page 17

Military Handbooks (For Guidance)

MIL-HDBK-61	Configuration Management Guidance

2.3 Industry Standards

ANSI/ISO/ASQC Q9003-1994	Quality System-Model for Quality Assurance in Final Inspection and Test

Industry Standards (For Guidance)

ANSI/EIA-649 National Consensus Standard for Configuration Management

Copies of Military Standards and Specifications are available from the DoD Single Stock Point, Document Automation and Production Service, Building 4/D, 700 Robbins Avenue, Philadelphia, PA 19111-5094, Commercial (215) 697-2179 or DSN 442-2179 or http://www.dodssp.daps.mil. Copies of handbooks, publications and other Government documents required by the contractor in connection with specific SOW requirements shall be obtained, in writing, from: Commander, Marine Corps Logistics Bases, Attn: Publication Branch (Code 876), Albany, Georgia, 31704-5000. Commercial (229) 639-5818/19, or DSN 567-5818/19. Copies of Drawings and Engineering Change Proposals required by the contractor shall be obtained in writing from Life Cycle Management Center, Attn: (Code 851-3), 814 Radford Blvd STE 20302 Albany, Georgia, 31704-0320, Commercial (229) 639-6410 or DSN 567-6410.

3.0 REQUIREMENTS

3.1 General Tasks. In fulfilling the specified requirements, the contractor shall:

a. Provide materiels, labor, facilities, and services necessary to troubleshoot, test, diagnose, engineer, integrate, install, restore, and calibrate as required to make the Crankshaft and Crankshaft Assembly fully operational. Upon completion of the restoration, the Crankshaft and Crankshaft Assembly shall be Condition Code "A".

b. Conduct final-on-site testing which may be witnessed by Marine Corps Logistics Bases Albany, Georgia (MARCORLOGBASEALB), (Code 834-1) representative at his/her discretion.

c. The contractor shall be responsible for all structural, electrical, and mechanical requirements associated with the rebuild of the Crankshaft and Crankshaft Assembly as specified in Cummins Technical Manual 3379035, RS 88643B-50/2 Draft, MIL-STD-2073-1D, and MIL-STD-129.

d. Ensure the Crankshaft and Crankshaft Assembly meet the configuration identified in RS-88643B-50/2 Draft.

e. All mandatory replacement parts identified in RS 88643B-50/2 Draft shall be replaced 100%. Economically replacement parts may be reused if they meet the applicable inspection requirements in TM 2350-45. All parts shall be disposed of in accordance with DoD 4160.21-M

3.2 Detailed Tasks. The following tasks describe the different phases for the rebuild of the Crankshaft or Crankshaft Assembly.

3.2.1 Phase I - Rebuild. The contractor shall receive Crankshaft or Crankshaft Assembly for rebuild. The contractor shall then disassemble the Crankshaft or Crankshaft Assembly into components and conduct the rebuild process. The contractor shall rebuild components in accordance with the requirements in RS 88643B-50/2 Draft, Cummings Technical Manual 3379035, and this SOW. The contractor shall be responsible for supplying all equipment, tools, test equipment, and materiels for the conduct of this effort. The contractor shall be responsible for the integration and

assembly of all components. The configuration identification for the Crankshaft or Crankshaft Assembly shall be shown in RS 88643B-50/2 Draft. Upon completion of the rebuild, the Crankshaft or Crankshaft Assembly shall be in condition Code "A". A Rebuild Data Plate shall be installed centered in the rear below the item identification plate. The rebuild data plate shall contain the following (REBUILT BY:) (INSPECTED BY:) and (DATE REBUILT:). The plate shall be no more than .008 in thickness, "2 ¾" in length and ¾" in height.

3.2.2 Phase II - Inspection, Testing, and Acceptance

Inspection, testing, and acceptance of the Crankshaft or Crankshaft Assembly shall be conducted in accordance with RS 88643B-50/2 Draft, TM-4700-45/6B and ANSI/ISO/ASQC Q9003-1994. Any deficiencies discovered shall be corrected by the contractor.

3.2.3 Phase III – Packaging, Handling, Storage, and Transportation (PHS&S)

a. The contractor shall be responsible for the preservation and packaging for items being repaired under the terms of this SOW. Items being prepared for long-term stowage or overseas shipment shall be in accordance with level "A" requirements with MIL-STD-2073-1D Method 30. Items being prepared for domestic shipment, or immediate use shall be to level "B" requirements.

b. Marking shall conform to MIL-STD-129.

c. The Marine Corps shall provide the contractor with the shipping address(es) for the delivery of the repaired equipment. The contractor shall be responsible for arranging for shipment to the pre-designated site(s). The Marine Corps shall be responsible for transportation costs associated with shipping the Crankshaft or Crankshaft Assembly to and from the Contractors.

3.3 Configuration Management

a. The contractor shall apply configuration control procedures to established configuration items. The contractor shall not implement configuration changes to an item's documented performance or design characteristics without prior written authorization. If it is necessary to temporarily depart from the authorized configuration, the contractor shall prepare and submit a Request For Deviation. MIL-HDBK-61 (paragraph 4.3 and Table 4-9) and ANSI/EIA-649 (paragraph 5.3.4) provide guidance for preparing this configuration control document.

b. The creation and submission of RFDs shall be accomplished using MEARS CREATE software which resides at a secure web site, http://mearsweb.redstone.army.mil. The contractor shall request User-ID and password privileges from the contracting activity for the purpose of gaining access to the web site and creating RFDs. MEARS CREATE privileges for the contractor shall be limited to two representatives and shall provide their e-mail address to the contracting agency upon selection. The contractor shall notify the contracting activity by e-mail when completed MEAERS RFDs are ready for formal submission and review by the contracting agency. The contractor shall direct technical or functional questions concerning usage of MEARS CREATE software to the contracting activity for guidance.

3.4 Government Furnished Equipment (GFE)/Government Furnished Materiel (GFM)

GFE is government owned equipment authorized by contract for use by a commercial/government contractor. It is neither consumed during production nor incorporated into any product. GFM is materiel furnished to a contractor that will be consumed during the course of production or incorporated into a product being manufactured/remanufactured under a contract/SOW. In the event the Marine Corps does have GFE/GFM requirements the Management Control Activity (MCA) at MARCORLOGBASEALB (MCA/827-2), will coordinate required GFE and will maintain a central control on Marine assets in the Contractors possession. The MCA will forward a GFE Accountability Agreement to the Contractor for signature to establish a chain of custody and property responsibility for Marine Corps assets.

3.5 Contractor Furnished Materiel (CFM)

The Marine Corps has adopted the Navy's procedures regarding CFM (NAVICPINST 4491.2A). In the event that CFM is required for repair parts, the DoD 4000.25-1-M, (MILSTRIP) Chapter 11 authorizes contractors to requisition through the DoD Supply System.

3.6. Quality Assurance Provisions

3.6.1 The performance of the contractor's quality of work performed, materiel provided and documents written shall be subject to in-process review and inspection by the MARCORLOGBASEALB (Code 834-1) representative during contract performance. Inspection may be accomplished at any work location. The MARCORLOGBASEALB (Code 834-1) representative shall be permitted to observe the work/tasks accomplishment and/or to conduct inspections at any reasonable hour. Acceptance Tests shall be held in-plant. The MARCORLOGBASEALB (Code 834-1) representative requires, at a minimum, two weeks notification of acceptance test to allow for sufficient time for MARCORLOGBASEALB (Code 834-1) representative to witnessing acceptance, if he or she desires. Inspection by the MARCORLOGBASEALB (Code 834-1) representative of all acceptance tests, materiels and associated lists furnished hereunder does not relieve the contractor from any responsibility regarding defects or other failures to meet the SOW requirements which may be disclosed prior to final acceptance.

3.6.2 The contractor shall provide and maintain a Quality System that as a minimum, adheres to the requirements of ANSI/ISO/ASQC Q9003-1994. The contractor's work shall be subject to in-process reviews and inspections for compliance with these procedures and standards by MARCORLOGBASEALB (Code 834-1) representative. Noncompliance with these quality assurance procedures resulting in degraded quality of work may result in a stop-work order requiring action by the contractor to correct the work performed and to enforce compliance with quality assurance procedures or face contract termination. Notwithstanding such inspection, it shall be the contractor's responsibility to ensure that the entire system meets the performance requirements of this SOW.

4.0 Report/Documentation

4.1 Report/Documentation that is required:

The contractor shall provide a monthly Production Status Report summarizing the progress and status of the Crankshaft Assembly.

CONTRACT DATA REQUIREMENTS LIST

(1 Data Item)

Form Approved
OMB No. 1704-0188

The Public reporting burden for this collection of information is authorized to average 110 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302 and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503. Please DO NOT RETURN your form to either of these addresses. Send completed form to the Government issuing Contract Officer for the contract/PR No. listed in block E.

A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY: TDP ___ TM ___ Other CM
D. SYSTEM/ITEM: Cummins VT-400 Engine, Crankshaft or Crankshaft Assembly	E. CONTRACT/PR No.	F. CONTRACTOR
1. DATA ITEM No.: B001	2. TITLE OF DATA ITEM: Request For Deviation	3. SUBTITLE
4. AUTHORITY *(Data Acquisition Document No.)*: DI-CMAN-80640C	5. CONTRACT REFERENCE: SOW Paragraph 3.3	6. REQUIRING OFFICE: MCLBA (851-2)
7. DD 250 REQ.: LT	9. DIST STATEMENT REQUIRED: A	10. FREQUENCY
8. APP CODE	11. AS OF DATE	12. DATE OF FIRST SUBMISSION: See Blk 16
		13. DATE OF SUBSEQUENT SUBMISSION

17. PRICE GROUP

18. ESTIMATED TOTAL PRICE

14. DISTRIBUTION

a. ADDRESSEE	b. COPIES: Draft	FINAL: Reg	FINAL: Repro
MCLBA (834-1)	0	0	0
MCLBA (851-2)	0	1	0
15. TOTAL	0	1	0

16. REMARKS

MEARS CREATE user-id and password will be assigned by the Requiring Office.

Blk 10&12: MEARS RFD text files shall be submitted electronically using MICROSOFT or ADOBE formatted software products.

Accompanying figures to text files shall be in a MICROSOFT Office format or CCITT Group 4 graphic file. Group 4 graphic files shall have a minimum density of 600 dpi.

Questions concerning MEARS CREATE V8.1 functionality shall be directed to the Requiring Office.

RFW notification shall be accomplished via-e-mail to the following address: mbmatcomconfigmngmnt@matcom.usmc.mil

Distribution Statement A: Approved for public release, distribution is unlimited.

G. PREPARED BY:	H. DATE	I. APPROVED BY:	J. DATE
Doug Sm	10-11-00		6/23/00

CONTRACT DATA REQUIREMENTS LIST

(1 Data Item)

Form Approved
OMB No. 1704-0188

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A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY: TDP ____ TM ____ Other XXX
D. SYSTEM/ITEM: Cummins VT-400 Engine, Crankshaft or Crankshaft Assembly	E. CONTRACT/PR No.	F. CONTRACTOR
1. DATA ITEM No.: A001	2. TITLE OF DATA ITEM: Production Status Report	3. SUBTITLE: Monthly Production Status Report
4. AUTHORITY (*Data Acquisition Document No.*): DI-MGMT-81255	5. CONTRACT REFERENCE: SOW 4.1.b	6. REQUIRING OFFICE: MARCORLOGBASES (834)
7. DD 250 REQ.: LT	9. DIST STATEMENT REQUIRED: A	10. FREQUENCY: MTHLY
8. APP CODE	11. AS OF DATE	12. DATE OF FIRST SUBMISSION: See Blk 16
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16. REMARKS

Block 4 - Contractor format is authorized. Delete the following paragraphs. These paragraphs do not apply to this deliverable: 10.1, 10.2.3, 10.2.5, 10.2.6, and 10.2.9.

In paragraph 10.2.1.d, "Master Work Schedule Line Number (MWSLN)" may be used in place of "contract number".

In paragraphs 10.2.4 and 10.2.7, replace "CLIN" with "MWSLIN" (Master Work Schedule Line Item Number).

Blocks 10 and 12 – The report shall be submitted on the tenth of each month. The first submission shall be 30 days after the contract award.

The Production Status Report shall be transmitted via E-Mail to the following address: HoffmanRE@matcom.usmc.mil

Distribution Statement A: Approved for public release, distribution is unlimited.

G. PREPARED BY:	H. DATE	I. APPROVED BY:	J. DATE
R. E. Hoffman	10/23/10		10/23/10