Draft Maintenance Concept Remains Consistent with Prior Fiscal Year

STATEMENT OF WORK

FOR THE

INSPECT, REPAIR ONLY AS NECESSARY (IROAN)

OF THE

AAVP7A1 RAM/RS NSN 2350-01-458-7410

AND

AAVC7A1 RAM/RS NSN 2350-01-458-7318

STATEMENT OF WORK
FOR THE INSPECT, REPAIR ONLY AS NECESSARY (IROAN)
OF THE AAVP7A1 AND AAVC7A1 RAM/R/S

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STATEMENT OF WORK
FOR THE INSPECT AND REPAIR ONLY AS NECESSARY (IROAN)
OF THE AAVP7A1 AND AAVC7A1 RAM/R/S

1.0 SCOPE

This Statement of Work (SOW), along with the Inspect, Repair only As Necessary (IROAN) Standards TM 09674A-50/5 and TM 10004A-50/3 establishes, sets forth tasks and identifies the work effort that shall be performed by the contractor in the effort to IROAN the AAVP7A1 RAM/RS (with Upgunned Weapons Station (UGWS)) and theAAVC7A1 RAM/RS (hereafter referred to as AAV) vehicles. This SOW and the referenced documents contain the minimum requirements necessary to restore the end item to a Condition Code "A". Condition Code "A" is defined as "new, used, repaired, or reconditioned material which is serviceable and issuable to all customers without limitation or restriction." The IROAN vehicle shall consist of components and parts ranging from new to meeting minimum serviceable tolerances.

1.1 Background

For purposes of this effort, IROAN is defined as "That maintenance technique which determines the minimum repairs necessary to restore equipment, components or assemblies to prescribed maintenance serviceability standards by using only the minimum necessary prescribed diagnostic equipment and test procedures in order to minimize disassembly and parts replacement."

2.0 APPLICABLE DOCUMENTS

The following documents form a part of this SOW to the extent specified. Unless otherwise specified, the issue dates 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, requests for conflict resolution shall be brought to the attention of Program Manager, Assault Amphibious Vehicles Systems (PM AAVS). Resolution of conflicts between reference documents and this SOW shall be complete prior to Phase II initiation by the PM AAVS. The current edition of these documents shall be used as references when work commences.

2.1 Military Standards

MIL-STD-129	DOD Standard Practice: Military Marking for Shipment and Storage

2.2 Other Government Documents and Publications

TM 09674A-10/3B	Operator's Manual
TM 09674A-50/5	Inspect, Repair Only As Necessary (IROAN) Standards for Assault Amphibious Vehicle (AAV7A1 –Modes AAVP7A1, AAVC7A1, AAVR7A1), updated to reflect RAM/RS components.

TM 10004A-50/3	Inspect, Repair Only As Necessary (IROAN) Standards for Upgunned Weapons Station (UGWS) Assault Amphibious Vehicle Personnel, Model AAVP7A1
TM 10004A-10/1C	Upgunned Weapons Station, Assault Amphibious Vehicle
TM 10004A-25&P/2C	Maintenance Instruction Upgunned Weapons Station (UGWS), Assault Amphibious Vehicle, Personnel, AAVP7A1
TM 8F152B-25&P/A	Power Plant Assembly Assault Amphibious Vehicle
TM 8F419B-35&P/A	Maintenance Instruction and Repair Parts List M36E3 Periscope, Upgunned Weapons Station, Assault Amphibious Vehicle Personnel, Model 7A1, AAVP7A1
TM 09674A-25&P/4B	Maintenance Instructions and Repair Parts List, Organizational, Intermediate and Depot Assault Amphibious Vehicle, 7A1 Family of Vehicles and RAM/RS
TM 07268B-25&P/2	Maintenance Instructions and Repair Parts List, Organizational, Intermediate and Depot Assault Amphibious Vehicle, 7A1, AAVC7A1
TM 2350-45	DMA Standard Procedures
DoD 4160.21-M	Defense Materiel Disposition Manual
PM Assault Amphibious Vehicle Drawing 7010050 CAGE 0MLM6	AAVP7A1
Naval Sea System Command Drawing 6289443 CAGE 53711	Upgunned Weapon Station
Engineering Drawing 5428747 CAGE 53711	Preparation for Shipment and Storage of the AAVP7A1
PM Assault Amphibious Vehicle Drawing 7010048 CAGE 0MLM6	AAVC7A1
Engineering Drawing 5435309 CAGE 53711	Preparation for Shipment and Storage of the AAVC7A1
TI-5820-25/22	Electromagnetic Environmental Effects (E3) Procedures for Installation of Communication Equipment on U.S. Marine Corps Platforms
TM 3080-25/1	Maintenance Instructions, Organizational, Intermediate and Depot for Assault Amphibious Vehicle AAV7A1 Corrosion Control
DoD 4000.25-1-M	Military Standard for Requisitioning and Issue Procedures (MILSTRIP)
PM, AAVS Configuration Management Plan dated 13 July, 2000	

Military Handbook (For Guidance Only)

MIL-HDBK-61	Configuration Management Guidance

2.3 Industry Standards

JESD625-A	Requirements for Handling Electrostatic-Discharge-Sensitive (ESDS) Devices
ANSI/ISO/ASQC Q9001-2000	Quality Management Systems Requirement

Industry Standards (for Guidance Only)

ANSI/EIA-649	National Consensus for Configuration Management

Copies of Military Standards and Specifications are available from the Document Automation and Production Service, Building 4/D, 700 Robbins Avenue, Philadelphia, PA 19111-5094, commercial telephone number (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: Commanding General (Code 586), Warehouse 1121, Suite 20321, Marine Corps Logistics Bases, Albany, Georgia 31704-0121, commercial telephone number (229) 639-6258 or DSN 567-6258. Copies of Engineering Drawings and Engineering Change Proposals required by the contractor shall be obtained from Supply Chain Management Center, Attn: (Code 566-1A), 814 Radford Blvd, Suite 20320, Albany, Georgia 31704-0320, commercial telephone number (229) 639-6476 or DSN 567-6476.

3.0 REQUIREMENTS

3.1 Detailed Tasks

The following tasks describe the different phases for the IROAN of the AAVs.

3.1.1 Phase I – Pre-Induction

A Pre-Induction Inspection Analysis shall be performed for each AAV using the contractor's diagnosis, inspection and testing techniques to determine the extent of work and parts required. These findings shall be annotated on the "PRE-INDUCTION CHECK SHEET FOR THE AAVs" (Appendix C of TM 09674A-50/5) and "IROAN PRE-INDUCTION AND FINAL INSPECTION CHECK SHEET FOR THE UPGUNNED WEAPON STATION (UGWS)" (Appendix C of TM 10004A-50/3). A PM AAVS representative will participate in the pre-induction LTI. Disposition of out of scope vehicles will be made on a case-by-case basis. PM AAVS will provide disposition guidance as required. As a result of this process, PM AAVS will provide a final determination of suitability for induction into the IROAN Program. The inspection sheets shall be made available to PM AAVS representatives upon request.

3.1.2 Phase II - IROAN

After Pre-Induction Tests and Inspections have been completed, IROAN of the AAVs shall be accomplished in accordance with the current edition of this SOW, PM Assault Amphibious Vehicle Drawing 7010050, CAGE 0MLM6, PM Assault Amphibious Vehicle Drawing 7010048 CAGE 0MLM6, Naval Sea System Command Drawing 6289443 CAGE 53711, TM 09674A-10/3B, TM 10004A-10/1C, TM 10004A-25&P/2C, TM 09674A-25&P/4B, TM 09674A-50/5, TM 10004A-50/3, TM 8F419B-35&P/A, TM 07268B-25&P/2 and TM 8F152B-25&P/A. Deficiencies noted in the Initial Inspection Check Sheets during Phase I shall be repaired or replaced. RAM/RS VTA903-T525 engines and hydrostatic steering units (HSU) found to require overhaul or rebuild shall be overhauled or rebuilt by the original equipment manufacturer (OEM). All minor repairs to the engine or HSU shall be performed by the contractor on site. Minor repairs are considered to be those that cost less than 25 percent of the total unit replacement cost. Components or assemblies shall not be disassembled for replacement of mandatory parts unless that part has failed, or the component or assembly wherein the part is located is disassembled for repair or inspection. Economically repairable replacement parts may be reused if they meet the inspection requirements in the technical manuals list in paragraph 2.2 of this SOW. Painting and marking shall be accomplished only to arrest corrosion. Corrosion control procedures shall be in accordance with TM 3080-25/1. Electromagnetic Environmental Effects (E3) procedures shall be conducted in accordance with TI-5820-25/22. All unserviceable parts shall be disposed of in accordance with DoD 4160.21-M.

The following tasks apply to the UGWS:

The M36E3 Periscope and major subassemblies shall be inspected, tested and accepted in accordance with TM 09674A-50/5 , TM 8F419B-35&P/A and this SOW.

All gunner controls and launcher switches shall be dismantled and thoroughly cleaned. All electrical connectors shall be coated with electrical insulation varnish after reassembly.

Shims, items 30, 37, 53, 97, 101, and 105 on Figure 6-4 of TM 10004A-25&P/2C may be reused if serviceable when disassembly of the traversing mechnaism is required.

The following tasks apply to the AAV7A1 hull:

Engine assemblies that meet the performance requirement during the preinduction inspection and dynamometer test shall be cleaned, corrosion control applied and painted for reuse. Pre-Induction tests shall be used to determine if the engine assembly is serviceable or if repairs are required. If unserviceable, repair or replace in accordance with TM 8F152B-25&P/A. Fill with 15/40 (MIL-21260) weight oil. Replace exhaust gaskets and clamps in accordance with TM 8F152B-25&P/A.

Transmission assemblies that met the performance requirements during the pre-induction inspection and dynamometer test shall be cleaned and corrosion control applied for reuse. Preinduction tests shall be used to determine if the transmission assembly is serviceable or if repairs are required. If unserviceable, repair or replace in accordance with TM 8F152B-25&P/A. Fill with 15/40 (MIL-2160) weight oil.

Final drive assemblies shall be completely disassembled. Inspect and repair or replace in accordance with TM 09674A-25&P/4B. Replace seals 100%. Fill with 15/40 (MIL-21260) weight oil.

The suspension system shall be removed, completely disassembled, and repaired in accordance with TM 09674A-25&P/4B. Remove the idler assembly, completely disassemble, inspect and repair in accordance with TM 09674A-25&P/4B. Replace the track assembly pads if worn to less the 3/8 inch above the top of the grouser or have chuncking deeper that ¾ inch on more than 10% of the pad surface, in accordance with TM 09674A-25&P/4B. Sealing compound, Type II, may be used on the support arm seal cavities in the support assembly, on the seal cavities of the retainer package, and the hub body of the support assembly.

Replace the fan tower bearing cartridges 100% in accordance with TM 8F152B-25&P/A.

Replace tension arm shaft, spider and bearing on short fan shaft, cooling tower resilient mounts and associated hardware 100% on the cooling system fan drive assembly in accordance with TM 09674A-25&P/4B.

Replace the air cleaner pack and cover gasket in accordance with TM 09674A-25&P/4B.

Replace midship bearings and seals 100% in accordance with TM 09674A-25&P/4B.

All suspension components (to include torsion bars) should be removed inspected and repaired or replaced. Reverse sprockets only if the opposite side has not been used. Sprockets shall not be welded to bring sprocket teeth within specification.

Remove double clamps on contact cooler base and replace with single clamp (NSN 4730-01-195-0375, part number 5428649-4) in accordance with TM 09674A-25&P/4B.

Replace rubber radiator mounts after inspection and determined unserviceable in accordance with TM 09674A-25&P/4B.

Clean fuel cell and half fill with JP-5/8 fuel.

All halon cylinders shall be inspected. Cylinders having less than four years before the next hydrostatic test is due, shall be hydrostatically tested during the IROAN. All repaired or rebuilt cylinder valves must be function tested and checked for leaks before reinstallation in the AAV. A final inspection of the installed Automatic Fire Suppression Support System (AFSSS) shall be accomplished using test kit 53689-2. Ensure all safety caps are attached to the cylinder valves.

The contact cooler system shall be pressure tested. The contact cooler shall be welded in accordance with the RAM/RS contact cooler repair procedure.

The procedures in TM 09674A-25&P/4B, TM 10004A-25&P/2C and TM 3080-25/1 shall be followed for corrosion removal, correction and prevention treatment. The following three items require cadmium coating: latch hook pintle (part number 2586331) , drive shaft (part number 2623014) and pintle body (part number 5419025).

3.1.3 Phase III - Inspection, Testing, and Acceptance

Inspection, testing, and acceptance of the AAV and UGWS shall be conducted in accordance with the current edition of TM 09674A-10/3B, TM 09674A-25&P/4B, TM 10004A-10/1C, TM 10004A-25&P/2C, TM 07268B-25&P/2, TM 8F152B-25&P/A, TM 8F419B-35&P/A, and this SOW. A PM AAVS representative will participate in the post IROAN LTI. As a result of this process, PM AAVS will provide a final determination of suitability for exit from the IROAN Program.

3.1.4 Phase IV – Packaging, Handling, Storage and Transportation (PHS&T)

a. The contractor shall be responsible for preservation and packaging of the items being repaired/rebuilt under the terms of this Statement of Work. Items scheduled for long-term storage shall be in accordance with the Level "A" requirements of Engineering Drawings

5428747 and 5435309, CAGE 53711. Items scheduled for domestic shipment for immediate use or shipment to overseas destinations with the exception of Maritime Prepositioned Forces (MPF) shall be to Level "B" requirements, Drive-on/Drive-off. Items scheduled for overseas shipment shall have a label affixed which reads "NOT FOR WEATHER DECK STOWAGE". Items scheduled for shipment to MPF shall be level "B", MPF Modified Drive Away.

Note

The terms Drive-on/Drive-off and MPF Modified Drive Away are defined as follows:

(1) Drive-on/Drive-off: Batteries shall be hot and disconnected from the vehicle electrical system. Terminals and leads shall be taped after loading. Fuel tank shall be filled ¼ full with JP 5/8. The air intake system, exhaust and brake systems, drive-train and gauges shall be de-preserved.

(2) MPF Modified Drive Away: Batteries shall be hot and connected to vehicle electrical system. Fuel tank shall be filled ¾ full of JP 5/8. The air intake system, exhaust and brake systems, drive-train and gauges shall be de-preserved. Fire extinguisher and seats shall be installed.

b. Markings for shipment and storage shall be in accordance with MIL-STD-129.

c. The Marine Corps will provide the contractor with the shipping addresses for delivery of the IROANed equipment. The contractor shall be responsible for arranging for shipment to the pre-designated site(s). The Marine Corps will be responsible for all transportation costs associated with shipping the subject equipment to and from the contractors facility.

3.2 Configuration Management (CM)

The contractor shall implement a CM program for the purpose of applying configuration control and capturing configuration status accounting information.

3.2.1 Configuration Control

The contractor shall apply configuration control procedures to establish configuration items per the provisions of the Family of Amphibious Vehicles Configuration Management Plan dated 13 July 2000. The contractor shall not implement configuration changes to an item's documented performance or design characteristics without written authorization. Procedures or materials contained in manuals, standards, instructions or engineering drawing/documents define the items characteristics. If deemed necessary to temporarily depart from authorized configuration, the contractor shall prepare and submit a Request for Deviation (RFD). MIL-HDBK-61 and ANSI/EIA-649 provide guidance for preparing RFDs. Requests for deviation shall be submitted in accordance with CDRL A003. The creation and submission of RFDs shall be accomplished using MEARS CREATE residing at https://mears1.redstone.army.mil. For the purpose of gaining access to the web site, the contractor shall request User-ID and password privileges from the Requiring Office identified in Block 6 of the applicable Contract Data Requirements List (CDRL). The contractor shall direct any technical or functional questions concerning usage of MEARS CREATE software to the Requiring Office for guidance. The contractor shall notify the Requiring Office by electronic mail when completed RFDs are ready for formal submission.

3.2.2 Configuration Status Accounting (CSA)

The contractor shall implement a process for documenting and providing CSA data of each vehicle successfully completing the Inspect, repair Only As Necessary (IROAN) program. The purpose of this task is for the Government to ensure the accountability and maintainability of the physical configuration identification of each vehicle. CSA data deliverables shall be submitted in MICROSOFT EXCEL format. Using the EXCEL format will enable the Requiring Office to automate the process of recording the CSA data into the Configuration Management Information System resulting in data accuracy and resource savings. CSA data shall be submitted in accordance with CDRL A002.

3.2.2.1 CSA Modification Tracking

The contractor shall provide, to the Requiring Office, identification of missing modifications from the vehicle's approved configuration found during the Pre-induction inspection and documentation of authorized modification applied during Phase II-IROAN. The listings of required modifications to be applied on each vehicle are identified in the Inspect, Repair Only as Necessary standards listed in section 2 of this SOW. The contractor shall identify the vehicle model, USMC number, IROAN location, final IROAN date, ECP/MI number and modification status code. Acceptable modification status codes are listed on the CSA CDRL, Block 16.

3.2.2.2 CSA Serialized Tracking

The contractor shall provide the serial numbers of targeted components selected for AAV serialized tracking. If maintenance action is required for the removal and replacement of any of these selected components, the contractor shall record the serial number of the newly installed component. For those tracked components that do not require replacement, the contractor shall record the serial number of the component currently residing in the vehicle. The contractor shall identify the vendor's serial number, government part number, component nomenclature, date of serialized component recording, installing activity (if applicable). Specific components to be tracked are identified in the CSA CDRL, block 16.

3.3 Quality Assurance Provisions

The performance of the contractor's quality of work performed, material provided and documents written shall be subject to in-process review and inspection by the PM, AAVS representative during contract performance. Inspection may be accomplished at any work location. The PM, AAVS representative requires at a minimum, two weeks notice of acceptance tests to allow for sufficient time for the PM, AAVS representative to witness the test if he or she desires. Inspection by the PM, AAVS representative of acceptance tests, materiels and associated list 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.

The contractor shall provide and maintain a Quality System that as a minimum adheres to the requirements of ANSI/ISO/ASQC Q9001-2000. The contractor's work shall be subject to in-process reviews and inspections for compliance with these procedures and standards by PM, AAVS representatives. 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.

3.4 Government Furnished Equipment (GFE)/Government Furnished Material (GFM)
The Management Control Activity (MCA) (Code 581-1B) will coordinate Government Furnished Equipment/Government Furnished Materiel (GFE)/(GFM) requests and maintain a central control system on all government owned assets in the contractor's possession. The MCA will forward a GFE Accountability Agreement to the contractor for signature on an annual basis to establish a chain of custody and identify property responsibilities for Marine Corps assets. The contractor is to acknowledge receipt of GFM within 15 days of receipt. This can be done by mailing a copy of the DD1348 to: Materiel & Distribution Management Department, Distribution Management Branch, Management Control Activity (Code 581-1B) 814 Radford Blvd, STE 20320, Albany, GA 31704-0320 or faxing a copy to commercial 229-639-5498 or DSN 567-5498.

3.5 Contractor Furnished Material (CFM)
The Contractor may requisition materiel as required in the performance of the SOW through the DoD Supply System. DoD 4000.25-1-M (MILSTRIP) Chapter 11 provides guidance to contractors on the requisitioning process. The contractor's decision to utilize CFM procured from the DoD Supply System shall be based upon cost effectiveness, availability of materiel and the required completion/delivery date.

3.6 Electrostatic Discharge (ESD) Control Program
The contractor shall establish, implement and document an ESD control program following the guidelines provided in JESD625-A. ESD protective measures shall be used during manufacturing, handling, inspection, testing, marking, packaging, storing and transporting ESD sensitive components.

3.7 Meetings, Reviews, and Conferences
The contractor shall, as appropriate, plan, host, attend, coordinate, support, and conduct meetings, formal reviews, and conferences (hereinafter called "reviews"). The reviews shall be conducted quarterly either employing Video Teleconferencing (VTC) or on-site at PM AAVS or the contractor's facilities. Reviews requiring demonstration and/or examination of equipment shall be conducted at the contractor's facility. The contractor shall prepare agendas and conference presentation materials and provide minutes and reports, within ten working days, following each review. Action item documentation, assignment of responsibility for completion, and due dates shall be determined prior to adjournment of all reviews. A summary of all action items, responsible parties, and estimated completion date shall be included with the minutes.

3.8 Management Support
The contractor shall provide a single point of contact for Project Management for the AAV IROAN effort. The single point of contact shall be responsible for ensuring compliance with the requirements of this SOW.

4.0 REPORTS

The contractor shall provide reports as required by the attached Contract Data Requirements Lists.

The contractor shall provide the Contractor's Progress, Status and Management Report in accordance with CDRL A001. Reports shall be addressed to Marine Corps Systems Command, Program Manager, Assault Amphibious Vehicles Systems, 2200 Lester Street, Quantico, Virginia 22134-6050.