STATEMENT OF WORK

FOR

SMALL EMPLACEMENT EXCAVAT0R

SEE TRACTOR

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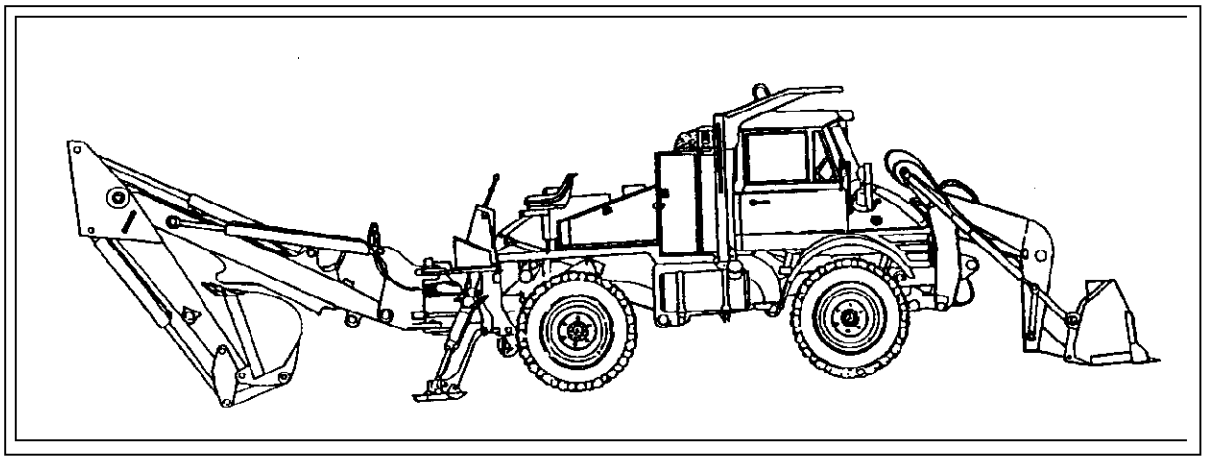

NSN 2420-01-160-2754

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STATEMENT OF WORK

SMALL EMPLACEMENT EXCAVATOR (SEE TRACTOR)
NSN 2420-01-160-2754
Inspect Repair Only As Necessary (IROAN)

1.0 SCOPE. This Statement of Work (SOW) establishes and sets forth tasks and identifies the work efforts that shall be performed by the contractor in the IROAN effort of the ***Small Emplacement Excavator Tractor (SEE Tractor)***. This document contains requirements to restore the SEE Tractor to condition code "A." Condition code A is defined as serviceable/issuable without qualification. Equipment defined as such should be new, used, repaired or reconditioned material which is serviceable/issuable to all customers without limitation or restriction. This includes material with more than six months shelf life remaining. National Stock Number (NSN) 2420-01-160-2754 shall be known as the SEE Tractor throughout the rest of this SOW.

1.1 BACKGROUND. IROAN is defined as "the maintenance technique which determines the minimum repairs necessary to restore equipment components or assemblies, to prescribed standards by utilizing all available 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, 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 requirements.

2.1 MILITARY SPECIFICATION

MIL-C-81309	Corrosion Preventive Compounds, Water Displacing, Ultra-Thin Film

2.2 MILITARY STANDARDS

MIL-STD-130	DOD Standard Practice for Identification Marking of U.S. Military Property
MIL-STD-129	DOD Standard Practice for Military Marking
MIL-STD-642	DOD Standard Practice for Identification Marking of Combat and Tactical Transport Vehicles

2.3 OTHER GOVERNMENT DOCUMENTS AND PUBLICATIONS.
The issues of these documents cited below shall be used.

TM-4750-15/2	Painting and Registration Marking for Marine Corps Combat and Tactical Equipment
TM-5-2420-224-24P	Technical Manual Unit, Direct Support and General

	Support Maintenance Repair Parts and Special Tools List.
TM-5-2420-224-20-1	Unit Maintenance Handout
TM-5-2420-224-10	Technical Operator's Manual
TM-5-2420-224-34	UL/DS/LGS Maintenance TM Reference Handout. SEPT 1997
SOMARPI 5-2420-224	Supplemental Operating, Maintenance and Repair Parts Instructions.
MI-07080D-25/1	Install Blackout Light Kit
ATPD 2241	Vehicles, Wheeled: Preparation for Shipment and Storage of.
DOD 4000.25-1-M	MILSTRIP Manual
NAVICPINST 4491.2A	***Requisitioning of Contractor Furnished Materiel From the Federal Supply System***
MCO P4400.82	***Regulated/Controlled Item Management Manual***

MILITARY HANDBOOKS (FOR GUIDANCE)

MIL-HDBK-61	***Configuration Management Guidance***

2.4 INDUSTRY STANDARDS.

ANSI/ISO/ASQC Q9002-1994,	***Quality Systems*** - Model for Quality Assurance in Production, Installation, and Servicing.

Industry Standards (For Guidance)

ANSI/EIA-649	***National Consensus Standard for Configuration Management***

Copies of Military Specifications and Standards are available from the DOD Single Point, Document Automation and Production Service, Building 4/D, 700 Robbins Avenue, Philadelphia PA 19111-5094, Telephone (215) 697-2179 or DSN 442-2179, or http://www.dodssp.daps.mil. ***Copies of other government documents and publications required by contractors in connection with specific SOW requirements shall be obtained through the Contracting Officer: Commander, Attn: Contracting Officer (Code 891) Marine Corps Logistics Bases, 814 Radford Blvd., Albany, Georgia 31704-1128, commercial telephone number (229) 639-6761 or DSN 567- 6761. Copies of engineering drawings, if applicable, shall be obtained from Life Cycle Management Center, Attn: Code 851-3, 814 Radford Blvd. Suite 20320, Albany, Georgia 31704-0320, commercial telephone number (229) 639-6410 or DSN 567-6410.***

3.0 REQUIREMENTS

3.1 GENERAL TASKS. In fulfilling the specified requirements, the contractor shall:

a. Provide materials, labor, facilities, missing parts, and repair parts necessary to inspect, diagnose, restore, and test the See Tractor. Upon completion of IROAN, repaired equipment shall be Condition Code "A".

b. Provide all tools and test equipment required to test, inspect, and calibrate the See Tractor.

c. In-process and final on-site testing must be witnessed by an MCLB (Code 837-2), Albany, representative.

d. The contractor shall be responsible for all structural, electrical and mechanical requirements associated with the restoration of the See Tractor.

3.2 IROAN OBJECTIVE AND FUNCTIONS. After IROAN, the See Tractor, shall have the following minimum characteristics:

a. Reliable as per system specifications.

b. Maintainable as per system specifications.

c. Serviceable (Condition Code "A").

d. All vehicle systems and components shall operate as intended.

3.3. DETAILED TASKS. The following tasks describe the different phases for IROAN of the See Tractor.

Phase I	Pre-Induction
Phase II	IROAN
Phase III	Inspection, Testing and Acceptance
Phase IV	Packaging, Handling, Storage, and Transportation (PHS&T)

3.3.1 PHASE I-PRE-INDUCTION.

a. A pre-induction inspection analysis shall be performed for the SEE Tractor using the ***contractor*** facility's diagnosis, inspection and testing techniques to determine extent of work and parts required. These findings shall be annotated on the Pre- Induction Checklist (Appendix A) **and** shall be maintained and be made available upon request to the MCLB ***Code 837-2 Albany***, representatives.

b. Test equipment shall be used to determine that assemblies and subassemblies meet prescribed reliability, performance, and work requirements. In cases when conformance to the SOW cannot be certified through existing inspection and testing procedures and by use of diagnostic equipment, the assembly shall be removed, disassembled, inspected, tested or repaired to the degree necessary to assure full conformance with this SOW.

c. Oil seal and gasket leakage. Evidence of lubricating or hydraulic oils passing through or around a seal is not a defect; however, consideration must be given to the fluid capacity in the item being checked/inspected. Inspection shall normally be performed during and immediately following an operational test, but not sufficient duration to allow the fluids to return to ambient temperature. The following shall be used as a guide in determining degree of oil loss:

(1) Class I - Seepage of fluid (indicated by wetness or discoloration) not great enough to form drops.

(2) Class II - Leakage of fluid great enough to form drops, but not enough to cause drops to fall from the item being checked/inspected.

(3) Class III - Leakage of fluid great enough to form drops that fall from the item being checked/inspected.

NOTE

A CLASS I OR II LEAK, EXCEPT FUEL SYSTEM AND BRAKE SYSTEM, IS AN ACCEPTABLE CONDITION AT ANY TIME AND DO NOT REQUIRE CORRECTIVE ACTION.

3.3.2 PHASE II - IROAN. IROAN shall be performed at ***the contractor's*** facility. Information recorded on the SOW Pre-Induction inspection sheets during pre-inspection phase shall be used as a guide by the contractor to achieve the mechanical baseline of production. After pre-induction tests and inspections have been completed, repair of the SEE TRACTOR shall be accomplished in accordance with this SOW. Deficiencies noted on the Pre-Induction Checklist (Appendix A) during Phase I shall be repaired/replaced. Components or assemblies shall not be disassembled for replacement of mandatory parts unless that part has failed, or the component assembly wherein the part is located is disassembled for repair. Mandatory replacement parts ***are*** contained in TM-5-2420-224-24P.

The following efforts shall be performed as part of the IROAN:

DETAILED MECHANICAL WORK. SEE TRACTOR(s) received for IROAN shall be reworked in accordance with the following paragraphs. All discrepancies noted on the SOW Pre-Induction inspection sheet shall be repaired/replaced.

a. **HARDWARE**

(1) Replace broken, unserviceable and/or missing hardware including nuts, bolts, screws, washers, turnlock fasteners, and one-time use items, etc, in accordance with the IROAN. Unserviceable would include any of the above that failed to function properly.

(2) Ensure proper hardware locking devices are present on all moving mechanical assemblies.

(3) Hardware normally supplied with commercial parts shall be used unless specifically prohibited.

(4) Hardware used in this IROAN shall be in accordance with ***TM-5-2420-224-24P.***

b. **ENGINE ASSEMBLY/TRANSMISSION**

(1) TEST PROCEDURES. After all pre-induction tests and inspection have been completed, the power pack shall be removed from the equipment, steam cleaned, and inspected for loose or missing items. Follow all warnings and procedures to assure you are working with safe and efficient methods and conditions.

The transmission shall be processed in accordance with paragraph 3.2.2 g. of this SOW.

(a) Mounting Block, Cylinder Head

(b) Crankshaft

(c) Flywheel Assembly

(d) Pistons and Connecting Rods

(e) Cover, Valve

(f) Engine Lubrication System

(g) Manifold

(h) Air Compressor

Test the following in accordance with TM-5-2420-224-34 to conform with inspection and testing procedures to assure full conformance with this SOW.

(2) PASS/FAIL. After the engine run test has been completed. The engine assembly shall meet or exceed the minimum specifications to be considered as having passed.

The above procedures for repair/replacement can be found in TM-5-2420-224-34.

c. **FUEL SYSTEM.**

(1) Test Procedures. ***Test the following in accordance with*** TM-5-2420-224-34 to conform with inspection and testing procedures to assure full conformance with this SOW.

Test all fuel injectors in accordance with TM-5-2420-224-34.

(a) Inspect the fuel pump assembly for loose or broken items and housing cracks.

(b) Inspect the fuel primer pump for leakage.

(c) Inspect the air cleaner indicator for proper function.

(d) Inspect fuel tank and lines for rusting and leakage.

(e) Inspect ether cold starting system switch, cylinder valve, pressure switch, thermal close valve/bushing, and atomizer cylinder for proper function and cracked/leaking tubing. Inspect engine cold starting switch, wiring and preheater.

(f) Inspect accelerator pedal and linkage for binding and proper function.

(g) Inspect air cleaner assembly for corrosion, damage and leaking.

(2) PASS/FAIL. Repair/Replace injectors that are not functioning properly.

(a) Repair/Replace any fuel pump assembly if needed.

(b) Replace the fuel primer pump if leaking. Assure that the pump is secure and free of leaks.

(c) Replace the air indicator if not functioning properly.

(d) Repair/Replace any fuel tank and lines that are rusting and leaking.

(e) Repair/Replace ***ether*** cold starting system switch, cylinder valve, pressure switch, thermal close valve/bushing, and atomizer cylinder that does not function properly. Repair/Replace any cracked/leaking tubing. Repair/Replace engine cold starting system switch, wiring, and preheater that does not function properly.

(f) Repair/Replace the throttle linkage if binding. Replace all broken or bent accelerator pedals. Replace all broken and distorted springs.

(g) Repair/Replace any hose, tube, and clamp that is leaking, damaged, or stripped.

(h) Replace all fuel filters and air filters 100 percent.

The above procedures for repair/replacement can be found in TM-5-2420-224-34.

d. **HYDRAULIC SYSTEM.**

(1) TEST PROCEDURES. Hydraulic fluid test procedure. Connect the pressure gauge to the test port as per the service manual. The test ports are between the hydraulic pump and the system's main relief.

Test the ***hydraulic system*** in accordance with SOMARPI 5-2420-224 to conform with inspection and testing procedures to assure full conformance with this SOW.

The SEE Tractor has two hydraulic systems. The front hydraulic pump is belt driven and is rated at 8 GPM at 2000 RPM, and the rear hydraulic pump is PTO driven and is rated at 26 GPM at 2000 RPM. The hydraulic system consists of the following.

(a) Hydraulic and fluid system.

(b) Hydraulic Pump, Front.

(c) Hydraulic Pump, Rear.

(d) Hydraulic Controls.

(e) Strainers, Filter Lines and Fittings.

(f) Hydraulic Cylinders.

(g) Tank, Front Hydraulic.

(h) Tank, Rear Hydraulic.

(i) Hydraulic Oil Cooler.

(2) PASS/FAIL. Repair/Replace any of the above if fail in accordance with SOMARPI 5-2420-224. Tube lines that are pinched or ***dented shall be replaced***. Replace hose if any of the following conditions exist.

(a) Replace if any evidence of hydraulic oil leakage at the surface of the hose or its junction with the metal end couplings.

(b) Replace if any blistering or abnormal deformation to the outer covering of the hose.

(c) Replace if hydraulic oil leak at any threaded or clamped joint that cannot be eliminated by normal tightening.

(d) Replace if evidence of excessive abrasion or scrubbing on the outer surface of hose or hoses.

The above procedures for repair/replacement can be found in TM-5-2420-224-20-1.

e. **COOLING SYSTEM**.

(1) TEST PROCEDURES. Inspect ***the following in accordance*** with SOMARPI 5-2420-224 to conform with inspection and testing procedures to assure full conformance with this SOW.

(a) Check cooling system for leaks.

(b) Check radiator cap.

(c) Inspect thermostat and housing for leaks.

(d) Inspect engine oil cooler for leaks.

(e) Inspect coolant pump assembly for leaks.

(f) Inspect fan blades for breaks, bends, and missing rivets.

(g) Inspect water pump for leaks and cracks.

(h) Inspect radiator for cracks and leaks.

(i) Check water pump for proper operation.

(j) ***Inspect hose clamps for tightness***.

(2) PASS/FAIL. Replace coolant, coolant belts, radiator, and heater hoses. Replace anti-freeze protection. Replace any hose or the above equipment that fail test in accordance with TM-5-2420-224-20-1.

f. **AXLES**

(1) TEST PROCEDURES. Inspect the following in accordance with SOMARPI 5-2420-224 to insure full conformance with this SOW.

(a) Differential Lock Lines

(b) Front and Rear Axles

(c) Housing, Beam, and Housing Covers

(d) Housing Axle

(e) Rear Differential Gears

(f) Differential Case

(g) Final Drive

(h) Seals (outer, inner)

(2) PASS/FAIL. Repair the above equipment in accordance with TM-5-2420-224-34 to conform with inspection and testing procedures to assure full conformance with this SOW.

g. **TRANSMISSION**

(1) Inspect in accordance with SOMARPI 5-2420-224 to conform with inspection procedures to assure full conformance with this SOW.

(a) Transmission Assembly and Associated Parts.

(b) Power Take - Off.

(c) Shifter Cover, Shifting Tongues, Forks, Pump and Filter.

(d) Controls, Transmission.

(e) Propeller Shaft, Front.

(f) U - Joint Front and Rear, and Thrust Balls.

(2) Upon completion of ***the inspection, it shall*** meet or exceed the minimum specifications. In the event the transmission fails the inspection. It shall be repaired or replaced. The transmission oil, filter, and oil pan gasket shall be replaced.

Repair/Replace the transmission linkage assembly if it does not operate smoothly. Replace all broken cables. If any of the above is not ***repairable summit a repairable item report per MCO P4400.82 to the appropriate item manager (Code 837-2) for action.***

h. **CLUTCH ASSEMBLY**

(1) TEST PROCEDURES. Inspect cover plate for rust corrosion, nicks, burrs, and deformation. Check cover plate for collapsed, broken or cracked springs. Inspect friction plate for rust, corrosion, nicks, burs, and deformation, no looseness allowed in rivets and linings. No distortion allowed in spline. Inspect bearing for nicks, burrs, looseness galling, and heat discoloration.

(a) Inspect clutch lever actuating link rod assembly for binding and proper function.

(b) Inspect clutch pedal return spring for proper operation.

(c) Inspect clutch pedal free travel for proper operation.

(d) Clutch Hydraulic Reservoir.

(2) PASS/FAIL. Repair/Replace cover plate assembly to ensure proper operation. Check SOMARPI 5-2420-224 for maximum warpage allowed on cover plate surface. Friction plate minimum wear limit thickness is found in TM-5-2420-224-34. Replace bearing that shows evidence of overheating, galling, or looseness.

(a) Repair/Replace clutch lever actuating rod assembly if not operating properly.

(b) Replace clutch pedal return spring if defective.

(c) Adjust clutch pedal free travel as required.

The above procedures for repair/replacement can be found in TM-5-2420-224-34 and SOMARPI 5-2420-224.

i. **BRAKE SYSTEM**

The brake system is a dual circuit hydraulic disc with compressed air assistance. The system is four wheel, six caliper, with Automatic Load Balancing. The rear parking brake is automatically adjusted.

(1) INSPECTION AND TEST PROCEDURES

(a) Inspect Brake Linkage, Hand Brake and pedal.

(b) Inspect parking brake for proper functioning.

(c) Inspect service brake.

(d) Inspect all brake lines for cracks and leaks.

(e) Inspect disc brake pads.

(f) Inspect hydraulic brake system.

(g) Inspect mechanical brake system.

(h) Inspect air reservoir tank for leaks and rust.

(i) Perform brake pump flow test.

(j) Inspect Trailer brake connections and controls.

(k) Inspect and test Automatic Load Balance.

NOTE

When the rear brake pads are replaced, it is necessary to make a basic adjustment to the parking brake. After which, the parking brake is self-adjusting.

(2) PASS/FAIL. Repair/Replace any or all of the above components that do not meet operational standards of TM-5-2420-224-34.

j. **TIRES, WHEELS**

(1) INSPECTION PROCEDURES. Inspect tire inflation. Inspect cupping, chunking, cuts, and cracks.

(a) Inspect wheels for cracks, breaks, and damaged mounting holes.

(b) Wheels shall be free of cracks, breaks, and damaged mounting holes. Front end alignment and toe-in-adjustment shall meet the standards prescribed in SOMARPI 5-2420-224. All wheels that do not meet these requirements shall be replaced.

(2) PASS/FAIL. Each tire must have 4/32 inch or more of tread remaining and be in good serviceable condition. All tires on a vehicle shall be matched to provide proper performance

and approximately equal life. Tires shall not show evidence of cupping or chunking. Tires shall not have cuts or cracks greater than one inch in length, 1/8 inch wide. Tires shall not have cuts or breaks, regardless of length or width, which extend to the fabric. Rubber separation or bulges on tire side walls are not acceptable.

All tires that do not meet these requirements shall be replaced.

The above procedures for repair/replacement can be found in SOMARPI 5-2420-224.

k. **STEERING SECTION**

(1) TEST PROCEDURES. Inspect power steering pump, steer mode selector valve, control unit, emergency steer motor and pump, reservoir, and cap for leaks and proper function.

(a) Inspect all power steering cylinder hoses for leaks.

(b) Inspect steering gear box assembly.

(c) Inspect all power steering tubing for leaks, cracks, kinks, or flat section.

(d) Inspect Steering hydraulic tank.

(e) Inspect steering wheel for cracks.

(f) Perform a hydraulic oil cooler restriction test.

(g) Inspect Steering hydraulic filter.

(h) Inspect tie rod and rod end.

(i) Perform steering crossover relief valve test.

(j) Inspect Steering Knuckle.

NOTE

All steering cylinders shall be removed and new seal kits and springs installed 100 percent.

(2) PASS/FAIL. Repair/Replace the power steering pump reservoir, and cap if leaking and not functioning properly. Replace power steering fluid 100 percent.

No welding or straightening (hot or cold) shall be permitted on steering gear controls. Steering wheels with minor cracks 1/8 inch wide or less which do not extend to the steering wheel core may be repaired by filling with a non-shrinking epoxy and sanded smooth.

The above procedures for repair/replacement can be found in TM-5-2420-224-20-1.

l. **ELECTRICAL SYSTEM**

The Electrical System is a 24-volt charging system, the major circuits are:

(1) Starting Circuit

(2) Charging Circuit

(3) Accessory Circuit

The master battery disconnect switch and three-position ignition switch are common components in all three circuits.

(1) TEST PROCEDURES. Inspect all wiring harnesses, battery cables for corrosion, bent or missing pins, and ripped or torn insulation and tie wraps. The following electrical systems should be tested/inspected.

(a) Alternator

(b) Regulator

(c) Starting Motor

(d) Instrument Panel

(e) Fuse Holder/fuses

(f) Lights

(g) Sending Units

(h) Horn

(i) Batteries, Storage/Batteries

(j) Chassis Wiring Harness

(k) NATO Slave Receptacle

(l) Trailer Connection

(2) PASS/FAIL. Repair/Replace all missing and bent pins. Repair of insulation less than four inches in length may be accomplished using electrical tape. Tears or rips in excess of four inches shall require installation of new conduit. Corrosion shall be removed from components. Upon removal of corrosion, if component does not function properly, replace component. Replace all damaged battery cables. Replace any missing or damaged tie wraps.

The above procedures for test/inspect repair or replacement can be found in TM-5-2420-224-20-1 and SOMARPI 5-2420-224.

m. **BODY, CAB HOOD AND HULL**

(1) TEST/INSPECTION PROCEDURES. Check side rails, cross members, front and rear springs, and under body supports for deteriorated bushings, broken bolts, cracks, broken welds, and rust. Check front and rear shock absorbers for leaks and loose or missing hardware. Remove all insulation from cab/floor and inspect for corrosion. Inspect the following.

(a) Body, Cab, Hood and Hull.

(b) Canopy, (FOPS).

(c) Doors, Cab.

(d) Fenders, Windows.

(e) Upholstery and Seats.

(f) Hose Reel Assembly.

(g) Body, Chassis, and Hull Accessory Items.

(h) Data Plate and Instruction Holder.

(i) Inspect glass for breaks and cracks.

(j) Inspect windshield wiper for proper function.

(k) Inspect mirror bracket for security.

(2) PASS/FAIL. Repair/Replace the above items and dents that exceed 7/16 of an inch. Corrosion shall be removed from ***components*** in accordance with MIL-C-81309. Upon removal of corrosion, if component does not function properly, replace component. Painting requirement shall adhere to TM-4750-15/2

The above procedures for repair/replacement can be found in TM-5-2420-224-10.

n. **DATA PLATES AND DECALS.**

DATA PLATE. Each repaired See Tractor shall have an IROAN data plate affixed next to the existing data plate. The data plate shall meet the requirements of MIL-STD-130.

(1) Test procedures. Inspect vehicle for missing, damaged, and illegible data plates and decals.

(2) PASS/FAIL. Replace all data plates and decals that are missing and illegible. IROAN data plates shall be prepared by the contractor and contain the following information:

VEHICLE SERIAL NO_____
REPAIRED IN ACCORDANCE WITH SOW-02-837-2-07080D-2/1
CONTRACTOR
FACILITY_____

DATE_____
VEHICLE ODOMETER OR HOUR READING AT TIME OF IROAN_____

NOTE

Odometers and hour meters on vehicles IROAN under provisions of this SOW shall not be turned back to zero.

RECORD JACKET: Be sure to record all major equipment or components serial numbers that are replaced in the record jacket of the See Tractor. (This includes engines, transmission, etc.).

3.3.3. PHASE III - INSPECTION, TESTING AND ACCEPTANCE.

a. Inspection, testing and acceptance of the See Tractor shall be conducted in accordance with SOMARPI 5-2420-224, TM-5-2420-224-34, and TM-5-2420-224-20-1.

b. The contractor shall be responsible for conducting required tests and shall ensure all necessary personnel are available to complete the final acceptance. Acceptance test shall be held at the ***contractor's facility***. MCLB (Code 837-2), Albany Georgia representatives shall be given a minimum of two weeks notice prior to beginning acceptance testing. The test area shall be cleared of all equipment parts and components, etc., not required for the test.

c. The contractor shall be responsible for correcting any deficiencies identified during inspection/testing. MCLB (Code 837-2), Albany, Georgia representatives may require the contractor to report tests or portions thereof, if the original tests fail to demonstrate compliance with this SOW.

d. Acceptance testing on all SEE TRACTORS repaired under the provisions of this SOW shall be accomplished in accordance with SOMARPI 5-2420-224, TM-5-2420-224-34, TM 5-2420-224-20-1, and provisions of this SOW.

e. Vehicle Markings. Registration numbers and other markings shall be applied in accordance with MIL-STD-642. Lifting and tie down attachments shall be identified with one-inch letters indicating "SLING POINT" or "TIE DOWN."

3.3.4 PHASE IV – PACKAGING, HANDLING, STORAGE AND TRANSPORTATION (PHS&T).

a. The Contractor shall be responsible for preservation and packaging of items being repaired under the terms of this statement of work. Items scheduled for long term storage shall be level "A" in accordance with ATPD 2241. Items being prepared for domestic shipment, immediate use, and/or shipment to overseas destinations with the exception of Maritime Prepositioned Forces (MPF) shall be preserved to level "B" Drive-on/Drive-off. Items being prepared for overseas shipment shall have a label affixed which reads "NOT FOR WEATHER DECK STOWAGE". Items scheduled for shipment to MPS shall be level B, MPS Modified Drive-way.

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

(1) Drive-on/Drive-off: Batteries will be hot and disconnected from the vehicle electrical system. Terminals and leads shall be taped. Fuel tank shall ***be ¼ full JP 5/8***. The air intake system, exhaust and brake systems, drive train and gauges are to be depreserved.

(2). MPF Modified Drive-away: Batteries shall be hot and connected to vehicle electrical system. Fuel tank shall be ***filled ¾ full of JP5/8***. The air intake system, exhaust and brake system, drive train and gauges are to be depreserved. Fire extinguisher bracket and all seats shall be installed.

c. Marking shall be in accordance with MIL-STD-129.

d. The Marine Corps will provide the contractor with the shipping addresses for delivery of the repaired equipment. The contractor shall be responsible for arranging for shipment of the equipment to the pre-designated sites. The Marine Corps will be responsible for transportation costs associated with shipping the subject equipment to and from the contractor.

3.4 CONFIGURATION MANAGEMENT

3.4.1 CONFIGURATION STATUS ACCOUNTING (CSA)

a. The Contractor shall determine the application status of approved configuration changes by visual inspections to the extent possible. The government will identify the configuration changes to be inspected by furnishing a Configuration Checklist (Appendix C) to the Contractor. The Contractor shall use one checklist for each SEE TRACTOR to record the inspection findings along with other required data.

b. The Contractor shall record serial numbers of the assemblies listed on the Configuration Checklist. The Contractor shall record the information on the same form that was used to record the application status of configuration changes.

c. The following approved Modification ***Instructions*** (MIs) shall be applied during Phase II of the IROAN process. If MI is installed on vehicle(s) provided to the contractor for IROAN, annotating the Configuration Checklist (Appendix C) as such will suffice.

MI-07080D-25/1	Install Blackout Light Kit on the Tractor, Wheeled, 4 X 4, Small Emplacement Excavator

3.4.2 CONFIGURATION CONTROL.

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.

3.5 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 product being manufactured/remanufactured under a contract/statement of work. In the event the Marine Corps does have GFE/GFM requirements, the Management Control Activity (MCA/Code 827-2), Marine Corps Logistics Bases, Albany, Georgia, will coordinate required GFE and will maintain a central control on Marine Corps assets in the Contractor's possession. The MCA will forward a GFE Accountability agreement to the Contractor Facility for signature to establish a chain of custody and property responsibilities for Marine Corps assets. The Contractor shall report receipt of all GFM and report consumption of GFM to the MCA.

3.6. CONTRACTOR FURNISHED MATERIEL (CFM).

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

3.7 QUALITY ASSURANCE PROVISIONS

The Contractor shall provide and maintain a Quality System that meets or is equivalent to the requirements of ANSI/ISO/ASQC Q9002-1994, Quality Systems - Model for Quality Assurance in Production, Installation, and Servicing. Inspection may be accomplished at any work location. Authorized MCLB (Code 837-2), Albany representatives shall be permitted to observe the work/task accomplishment or to conduct inspections at all reasonable hours. Acceptance tests shall be held in plant. Inspection by the MCLB (Code 837-2), Albany, representatives of all acceptance tests plans, materials and associated lists furnished hereunder does not relieve the contractor from any responsibility regarding defects or other failures to meet contract requirements which may be disclosed prior to final acceptance.

Noncompliance with procedures resulting in degraded quality of work may result in a stop work order requiring action for contractor to correct the work performed and to enforce compliance with quality assurance procedures or face contract termination. It shall be the ***contractor's*** responsibility to ensure that the entire system meets the performance requirements. Inspection and test plan shall be utilized as guidelines whenever applicable and in accordance with this SOW.

Quality assurance operations performed by the contractor shall be subject to MCLB (Code 837-2), Albany representatives' verification at any time. MCLB (Code 837-2), Albany representatives' verification can include, but shall not be limited in any matter, to the following:

a. Inspection of materials, products, assemblies, and documentation to assess compliance with quality standards.

b. Surveillance of operations to determine that quality assurance, practices, methods, and procedures are being properly applied.

c. Inspections of deliverable products to assure compliance with all requirements of the SEE Tractor, this SOW, and applicable documents used herein.

3.8 ACCEPTANCE

The performance of the contractor and the quality of work delivered, including all equipment furnished and documentation written or compiled, shall be subject to in process review and inspection during performance. Inspection may be accomplished in plant or at any work site or location, and MCLB (Code 837-2), Albany representatives shall be permitted to observe the work or to conduct inspection at all reasonable hours. Final inspection and acceptance testing shall be conducted at the contractor's facility. Final acceptance shall be conducted on 100 percent of items to verify that the units meet all requirements.

3.9 REJECTION

Failure to comply with any of the specified requirements listed herein shall be reason for rejection by MCLB (Code 837-2), Albany representative. The contractor shall at no additional cost to, MCLB, Albany Georgia, provide the following:

a. Develop an approach for modification or correction of all deficiencies.

b. On approval of a documented approach, the contractor shall correct the deficiencies and repeat verification until acceptable compliance with acceptance test procedures is demonstrated.

4.0 ***REPORTS*** ***All reports deliverables shall be submitted in hard copy to Commander (Code 837-2), Marine Corps Logistics Bases, 814 Radford Blvd. Suite 20320, Albany, Georgia 31704-0320, unless directed otherwise in a Contract Data Requirements List.***

4.1 Pre-induction Checklist. The contractor shall complete the pre-induction inspection checklist (Appendix A) for each SEE Tractor repaired. These documents shall be available during final acceptance testing.

4.2 Final Road Test Checklist. The contractor shall provide one copy per vehicle, of the final road test results (Appendix B) performed on SEE Tractor. Also provide a copy of the pre-induction checklist. These sheets must be available for review during the final acceptance testing and shall be sent to MCLB Albany Code 837-2 upon acceptance of vehicle.

4.3 Configuration Checklist. The Contractor shall complete the Configuration Checklist (Appendix C) for each SEE TRACTOR IROANed. This document shall be available during final acceptance testing. One copy of each document shall be provided to the Weapon System Manager (Code 837-2) and/or their representative(s) after final acceptance of the SEE TRACTOR, or upon request.

PRE-INDUCTION CHECKLISTS
FOR THE
SEE TRACTOR

DATE: **REFERENCES:**
ID 07080D

U.S. M.C. NO. **MILES**

JOB ORDER NO. **HOURS**

PRODUCTION NO. **SERIAL NO.**

ENGINE NO.

TRANSMISSION NO.

INSPECTORS' NAME **BADGE NUMBER** **SHIP NUMBER**

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NOTE: The following inspection sheets are divided into columns. The inspector will place a check in the box which best describes the condition of the item being inspected, for those items that cannot be inspected for any reason the inspector will make an appropriate annotation in the remarks column. If the inspector finds a defect that could cause injury to the operator or damage to the end item, testing will cease until the defect is corrected or the decision is made to induct the SEE TRACTOR into the shop.

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1. Monitor Indicator And Gauge Checks (Engine Off)	**OK**	**NOT OK**	**COMMENTS REPAIR/REPLACE**
Key Switch Check	☐	☐	
Bulb Check Circuit Check	☐	☐	
Fuel Gauge Check	☐	☐	
Transmission Temperature Gauge Check	☐	☐	
Hour Meter Check	☐	☐	
2. Transmission, Assembly and Associated Parts.			
Transmission Power Take-Off.	☐	☐	
Shifter Cover, Shifting Tongues, Forks, Pump and Filter.	☐	☐	
Control Linkage Check.	☐	☐	
Valve, Selector, and All Wheel Drive.	☐	☐	
Regulator, Pressure, All Wheel Drive.	☐	☐	
Check Transmission for cracks, Leaks, Damage housing.	☐	☐	
Cylinder, Control, All Wheel Drive.	☐	☐	
3. Propeller Shaft.			
Propeller Shaft, Front.	☐	☐	
U-Joint, Front Propeller Shaft, Rear.	☐	☐	
Thrust Balls, Front and Rear.	☐	☐	
4. Front Axle			
Front Axle Assembly (complete).	☐	☐	
Differential, Lock Piston.	☐	☐	
Gear, Front Differential Ring and Pinion.	☐	☐	
Case, Differential.	☐	☐	
Gear, Driving and Driven Wheel.	☐	☐	
Seals, Final Drive (outer).	☐	☐	
Seals, Final Drive (inner).	☐	☐	

	OK	**NOT OK**	**COMMENTS REPAIR/REPLACE**
4. Rear Axle.			

Rear Axle Assembly.		☐	☐
Differential Lock Piston seal.		☐	☐
Housing, Beam, and Housing Covers.	☐	☐	
Housing Axle.		☐	☐
Rear Differential Gears.		☐	☐
Differential Case.		☐	☐
Final Drive.		☐	☐
Gear, Hub, Driving/Driven Seals (inner)		☐	☐
Seals (outer).		☐	☐

5. **Brakes.**

Hand Brake.		☐	☐
Parking Brake Controls.		☐	☐
Rotors, Brakes.		☐	☐
Disc Brake Pads.		☐	☐
Brake Calipers Hydraulic.		☐	☐
Hydraulic Brake System.		☐	☐
Cylinder, Master.		☐	☐
Lines and Fittings.		☐	☐
Regulator, Brake Pressure (ALB).		☐	☐
Reservoir, Brake.		☐	☐
Mechanical Brake System.			
Brake Pedal.		☐	☐
Air Brake System.		☐	☐
Air Reservoir Tank.		☐	☐
Booster, Brake.		☐	☐
Reservoir, Anti-freeze.	☐	☐	
Device, Anti-freeze.		☐	☐
Trailer Brake Connection and Controls.		☐	☐
Relay Valve.		☐	☐
Lines and Fittings		☐	☐

6. **Steering.**

Steering Assembly:			
Tie Rod and Rod End		☐	☐
Wheel, Steering		☐	☐

		OK	NOT OK	COMMENTS REPAIR/REPLACE
Drag Links.		☐	☐	
Pitman Arm.		☐	☐	

Bearing, Steering Upper Shaft.	☐	☐	
Steering Gear Box Assembly.		☐	☐
Power Steering Pump.		☐	☐
Hoses, Lines and Fittings.		☐	☐
Steering Hydraulic Filter.		☐	☐

7. **Frames, Towing Attachments, and Draw-Bars.**

Frame, Support and Bushing.		☐	☐
Crossmember, Rear.		☐	☐
Front Loader Mounting Bracket.		☐	☐
Platforms, Rear.		☐	☐
Pintle Hook.		☐	☐
Spare Tier Mount.		☐	☐

8. **Spring and Shock Absorbers.**

Springs, Front and Rear.		☐	☐
Shock Absorbers, Front and Rear.		☐	☐
Torsion Bars and Control Arms.		☐	☐

9. **Body, Cab, Hood and Hull.**

Body, Cab, Hood and Hull Guard, Front.		☐	☐
Canopy (FOPS) Falling Object.		☐	☐
Protection, Roll-Over (ROPS).		☐	☐
Hood, Outside.	☐	☐	
Engine Compartment Cover Inside Cab.		☐	☐
Doors, Cab.		☐	☐
Fenders, Windows.		☐	☐
Windshield.		☐	☐
Mud Flaps Supports.		☐	☐
Cab Shock Absorbers.		☐	☐
Cab Tilt Device.		☐	☐
Backhoe Subframe Grating.		☐	☐
Upholstery, Seats and Carpets.	☐	☐	
Seat, Operator.	☐	☐	
Seat, Backhoe.		☐	☐

	OK	NOT OK	COMMENTS REPAIR/REPLACE
Framework, Operator Seat.	☐	☐	
Seat, Passenger.	☐	☐	
Framework, Passenger Seat.	☐	☐	
Belts, Seat.	☐	☐	

Liners, Floor.	☐	☐	
Liner, Roof.	☐	☐	
Visor, Sun.	☐	☐	
Hose Reel Assembly.	☐	☐	
Hydraulic Tool Box, Chassis.	☐	☐	

10. **Body, Chassis, and Hull Accessory Items.**

Mirrors.	☐	☐	
Wiper Motor.	☐	☐	
Pump, Windshield Washer.	☐	☐	
Defroster and Air Tubes.	☐	☐	
Heater, Cab Water.	☐	☐	

11. **Hydraulic and Fluid System.**

Hydraulic Pump, Rear.	☐	☐	
Hydraulic Pump, Front.	☐	☐	
Belt, Front Hydraulic Pump.	☐	☐	
Valves, Relief, Hydraulic, Front Loader.	☐	☐	
Backhoe/Crane Control Valves Tilt Lock.	☐	☐	
Control Assembly.	☐	☐	
Loader Relief Valve.	☐	☐	
Backhoe Relief Valve, Boom, Dipper, Bucket, Swing.	☐	☐	
Loader/Forklift Control Valve (main relief).	☐	☐	
Backhoe Main Relief Valve.	☐	☐	
Stabilizer Control Valve.	☐	☐	
Crane Flow Divider Valve.	☐	☐	
Backhoe Controls and Linkage.	☐	☐	
Loader/Forklift Controls and Linkage.	☐	☐	
Crane Controls and Linkage.	☐	☐	
Forklift Mast Assembly.	☐	☐	
Forklift Carriage Assembly.	☐	☐	

	OK	NOT OK	COMMENTS REPAIR/REPLACE
Forklift Rotator Assembly.	☐	☐	
Forklift Lift Chains.	☐	☐	
Forklift Forks.	☐	☐	
Forklift Travel Lock.	☐	☐	
Strainers, Filter Lines and Fittings.	☐	☐	
Hydraulic Tank.	☐	☐	

Filters.	☐	☐	
Hoses, Fittings and Lines.	☐	☐	
Hydraulic Cylinder.	☐	☐	
Loader Boom Cylinder.	☐	☐	
Backhoe Boom Cylinder.	☐	☐	
Backhoe Swing Cylinder.	☐	☐	
Backhoe Bucket Cylinder.	☐	☐	
Backhoe Dipper Cylinder.	☐	☐	
Backhoe Stabilizer Cylinder.	☐	☐	
Backhoe/Crane Tilt Cylinder.	☐	☐	
Backhoe/Crane Latch Cylinder.	☐	☐	
Backhoe latch.	☐	☐	
Forklift Tilt Cylinder.	☐	☐	
Forklift Rotator Cylinder.	☐	☐	
Forklift Cylinder	☐	☐	
Crane Extension Cylinder, External Boom End.	☐	☐	
Crane Cylinder, Main Boom Lift.	☐	☐	
Crane Cylinder, Mast Locking.	☐	☐	
Crane Cylinder Folding.	☐	☐	
Crane Cylinder, Outriggers Power-Out Horizontal.	☐	☐	
Crane Cylinder, Outriggers Power-Down Vertical.	☐	☐	
Tank, Front Hydraulic (11 gal).	☐	☐	
Tank, Rear Hydraulic (21 gal).	☐	☐	
Hydraulic Oil Cooler.	☐	☐	

11. **Gages (non electrical).**

Speedometer.	☐	☐	
Sight Gages, hydraulic Tanks.	☐	☐	
Inclinometer.	☐	☐	

	OK	NOT OK	COMMENTS REPAIR/REPLACE
Hour meter.	☐	☐	
Tires.	☐	☐	

FINAL ROAD TEST CHECK LIST
SEE TRACTOR

All safety checks must be satisfactory completed prior to road test. If necessary, before performing tests and checks, wipe down components where grease, oil or dirt could possibly form.
The following items shall be checked during the vehicle static test with the vehicle operating.

CHECK THE FOLLOWING GAUGES FOR CORRECT READINGS	SATFY	HISSING	SERVICE □	ADJUST	REPAIR □	REPLACE □	MODIFY	REMARKS
a. Tachometer reading at idle								
b. Engine oil pressure, minimum of psi at idle								
c. Air cleaner restriction indicator								
d. Alternator warning light								
e. Voltmeter								
f. Fuel gauge register equivalent to tank level								
g. Engine coolant (after road test)								
h. Dual brake pressure gage								
2. **CAB CONTROLS (can be done on road test)**								
a. Windshield washer								
b. Windshield wipers left and right.								
c. Heater/defroster fan.								
d. Heater ducks for air transfer case								
e. Horn for proper operation								

	SATFY □	**HISSING** □	**SERVICE** □	**ADJUST** □	**REPLACE** □	**REPAIR** □	**MODIFY** □	REMARKS
3. BRAKE OPERATION (does it pull or stall when applied on quick stop)								
a. Park brake holds.								
b. Park brake release, operates properly.								
c. Service brakes operate properly								
4. **ACCELERATOR**								
a. Accelerates smoothly.								
b. Doesn't stick or bind								
5. **STEERING**								
a. Operates smoothly								
b. Doesn't wander or pull.								
6. **LIGHTS (operational)**								
a. Dash panel								
b. Shift selector								
c. Headlights High and low beam.								
d. Clearance side marker lights.								
7. **WINDSHIELD WIPERS.**								
a. Left wiper								
b. Right wiper								
8. **TURN SIGNALS**								
a. Left signal.								
b. Right signal.								

CONFIGURATION INSPECTION CHECKLIST

Tractor, Small Emplacement Excavator

VEHICLE:

Marine Corps Registration Number _____.

OEM Model Number _____.

Vehicle Hours at Pre-Induction _____.

VEHICLE ENGINE:

Original Engine Serial Number _____.

Engine Required Replacement: YES ____. NO _____.

Replacement Engine Serial Number _____.

VEHICLE TRANMISSION:

Original Transmission Serial Number _____.

Transmission Required Replacement: YES ____. NO ____.

Replacement Transmission Serial Number _____.

APPROVED CONFIGURATION CHANGES:

Approved Waivers/Deviations applied during IROAN:

Waivers: _____

Deviations: _____

Modification Instructions:

MI-07080D-25/1; Applied Prior to IROAN _____, During IROAN _____

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 XXX
D. SYSTEM/ITEM: Small Emplacement Excavator See Tractor 4x4 Wheeled	E. CONTRACT/PR No.	F. CONTRACTOR
1. DATA ITEM No.: A001	2. TITLE OF DATA ITEM: Request for Deviation (RFD)	3. SUBTITLE: Configuration Management
4. AUTHORITY (Data Acquisition Document No.): DI-CMAN-80640C	5. CONTRACT REFERENCE: SOW	6. REQUIRING OFFICE: MARCORLOGBASES (851)
7. DD 250 REQ.: LT	9. DIST STATEMENT REQUIRED: A	10. FREQUENCY: AS REQ
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 (851-2)	0	1	0
15. TOTAL	0	1	0

16. REMARKS

Block 4 – Contractor format is authorized and shall be submitted in .doc or .pdf format.

Block 12 - RFDs will be reviewed and disposition determined within 30 calendar days upon receipt by the government.

RFDs shall be transmitted via e-mail to the following address: mbmatcomconfigmngmnt@matcom.usmc.mil

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

G. PREPARED BY: [signature]	H. DATE: 11-6-06	I. APPROVED BY: James A. Adams	J. DATE: 00318

DD FORM 1423-1, AUG 96 (EG) PREVIOUS EDITION MAY BE USED

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