STATEMENT OF WORK

FOR

SMALL EMPLACEMENT EXCAVATOR

SEE TRACTOR

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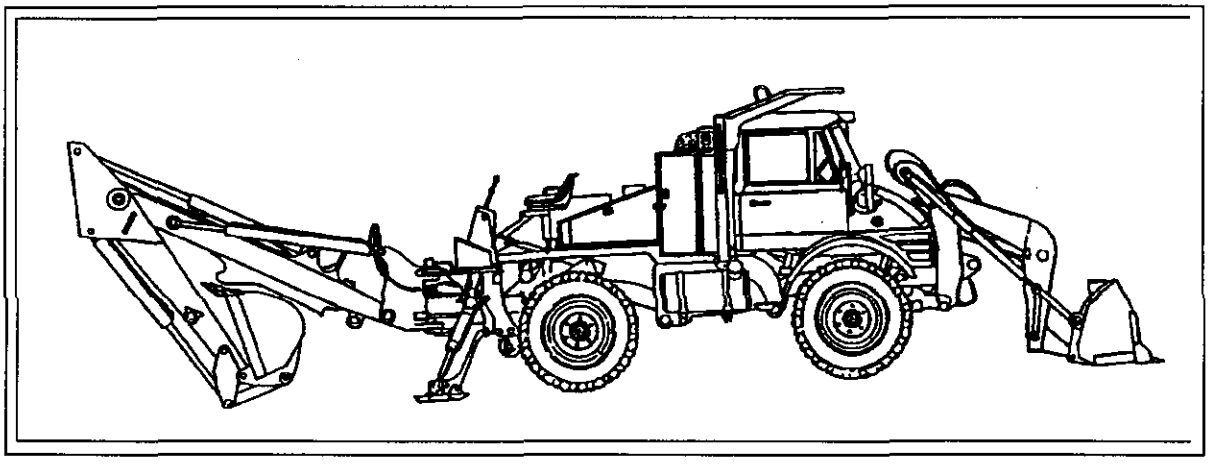

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STATEMENT OF WORK

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), hereafter referred to as the 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
MCO P4400.82	Regulated/Controlled Item Management Manual
TM9-2610-200-14	Care, Maintenance, Repair & Inspection of Pneumatic Tires and Inner Tubes

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, commercial telephone number (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: Contracts Department, (Code 891), P. O. Drawer 43019, 814 Radford Blvd.,

MCLB, Albany, GA 31704-3019 814 Radford Blvd., Albany, Georgia 31704-3019, commercial telephone number (229) 639-6761 or DSN 567- 6761. Copies of engineering drawings, if applicable, shall be obtained from Supply Chain Management Center, Attn: Code 583-1, 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 a Marine Corps Systems Command (MCSC), (Code CSLE), Albany, Georgia and/or their representatives.

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 MCSC, (Code CSLE), Albany, Georgia, and/or their 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:

a. 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.

b. 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.

c. Engine Assembly/Transmission.

(1) TEST PROCEDURES. After all Pre-Induction Tests and Inspections 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 3.3.2 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.

d. 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 do 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.

e. 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 MCSC, (Code CSLE), Albany, Georgia, and/or their representatives 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 wheels, 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 and Wheels.

(1) INSPECTION PROCEDURES. The Tire Inspection Checklist contained in TM9-2610-200-14 shall be used to dicument the tire inspection and shall be provided as part of the Pre-Induction Checklist. Inspect tires for correct inflation, inspect for cupping, chuncking,cuts and cracks. TM9-2610-200-14, Section 2-37, Visual Guide for Technical Inspection and Classification of Tires: This technical inspection shall be the guide used to distinguish between repairable and nonreapairable defects and the serviceability of tires.

(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 TM5-3810-305-24. All wheels that do not meet these requirements shall be replaced.

(2) PASS/FAIL. All tires shall meet classification code "B" as identified in TM9-2610-200-14. Recapped tires are not premitted. Each tire must have at least 25% 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. Mixture of bais and radial tires is not premitted. 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. Any damage to the tire bead is 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, pump, reservoir, and cap for leaks for 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/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-04-CSLE-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 MCSC, (Code CSLE), Albany, Georgia and/or their representatives are available to complete the final acceptance. Acceptance test shall be held at the contractor's facility. MCSC, (Code CSLE), Albany, Georgia, and/or their 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. MCSC, (Code CSLE), Albany, Georgia, and/or their representatives may require the contractor to repeat tests or portions thereof, if the original tests fail to demonstrate compliance with this SOW.

d. Acceptance Testing on all SEE Tractor 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 of JP5/8. 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 for shipment and storage 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 items' 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 and ANSI/EIA-649 provide guidance for preparing this configuration control document.

3.5 Government Furnished Equipment (GFE)/Government Furnished Materiel (GFM). The Management Control Activity (MCA/Code 573-2) 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 to the MCA within 15 days of receipt. (This can be done by mailing (Materiel Management Department, Management Control Activity (Code 573-2), 814 Radford Blvd., STE 20320, Albany, GA 31704-0320) or faxing (commercial 229-639-5498 or DSN 567-5498) a copy of the DD1348).

3.6. Contractor Furnished Materiel (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.

3.7 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 MCSC, (Code CSLE), Albany, Georgia, and/or their 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 MCSC, (Code CSLE), Albany, Georgia, and/or their 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.

Quality assurance operations performed by the contractor shall be subject to MCSC, (Code CSLE), Albany, Georgia and/or their representatives verification at any time. MCSC, (Code CSLE), Albany, Georgia and/or their 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 MCSC, (Code CSLE), Albany, Georgia and/or their 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 MCSC, (Code CSLE), Albany, Georgia and/or their representatives. The contractor shall at no additional cost to MCSC, (Code CSLE), Albany, Georgia and/or their representatives 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 report deliverables shall be submitted in hard copy to Marine Corps Systems Command, (Code CSLE), 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 to MCSC, (Code CSLE), Albany, Georgia and/or their representative 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 MCSC, (Code CSLE), Albany, Georgia and/or their representatives 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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PRE-INDUCTION CHECKLISTS

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[1]	ADJUST	REPAIR[1]	REPLACE[1]	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								

	SATFY1	HISSING1	SERVICE1	ADJUST1	REPLACE1	REPAIR1	MODIFY1	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. 0704-0188

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A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY: TDP ____ TM ____ OTHER X

D. SYSTEM/ITEM	E. CONTRACT/PR NO.	F. CONTRACTOR
SEE Tractor		

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE
B001	Request For Deviation	Configuration Management

4. AUTHORITY (Data Acquisition Document No.)	5. CONTRACT REFERENCE	6. REQUIRING OFFICE
DI-CMAN-80640C	SOW 3.4.2	MCLBA (583)

7. DD 250 REQ	8. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION
LT		ASREQ	SEE BLK 16

9. APP CODE	11. AS OF DATE	13. DATE OF SUBSEQUENT SUBMISSION
A	A	

17. PRICE GROUP

18. ESTIMATED TOTAL PRICE

14. DISTRIBUTION

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MCLBA (583-1)	0	1	0
15. TOTAL →	0	1	0

16. REMARKS

Blk 4 - Contractor format is authorized.

Blks 10 & 12 - RFDs shall be submitted to obtain authorization to deliver nonconforming material which does not meet prescribed configuration documentation.

RFDs will be reviewed and disposition determined within 30 calendar days upon receipt by the Government.

Blk 14 - RFDs shall be submitted via e-mail to the following address: mbmatcomconfigmngmnt@matcom.usmc.mil

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G. PREPARED BY	H. DATE	I. APPROVED BY	J. DATE
Ann Jowen for Cobb Pettis	18 Oct 2001	James Rolando	02297

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