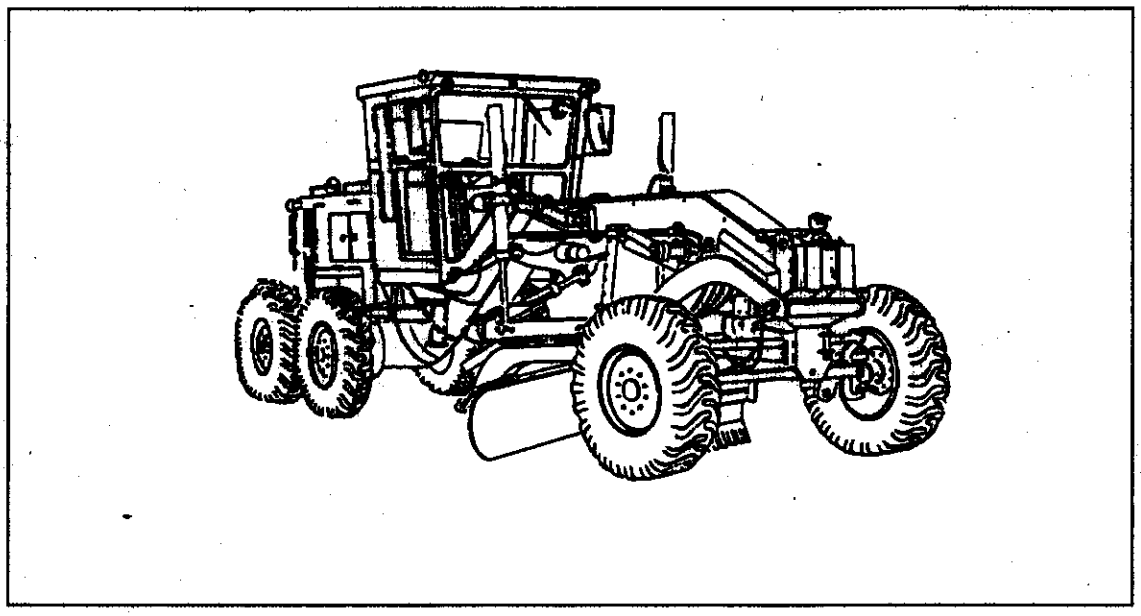
STATEMENT OF WORK (SOW)

GRADER HEAVY, ROAD, MOTORIZED, DIESEL ENGINE DRIVEN

INSPECT AND REPAIR ONLY AS NECESSARY (IROAN)



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STATEMENT OF WORK FOR THE GRADER, HEAVY, ROAD, MOTORIZED, DIESEL ENGINE DRIVEN Inspect Repair Only As Necessary (IROAN) NSN 3805-01-150-4795

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 Grader, Heavy, Road, Motorized, Diesel Engine Driven. This document contains requirements to restore the Grader, Heavy, Road, Motorized, Diesel Engine Driven to Condition Code "A." Condition Code A is defined as "serviceable/issuable without qualification, new, used, repaired or reconditioned material which is serviceable and issuable to all customers without limitation or restriction. This includes material with more than six months shelf-life remaining." National Stock Number (NSN) 3805-01-150-4795 shall be known as Grader, Heavy, Road, Motorized, Diesel Engine Driven.

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, the issues of these documents are those listed in the Department of Defense Index of Specifications and Standards (DoDISS) and supplement thereto which is in effect on the date of solicitation. In the event of conflict between the documents referenced herein and the contents of this SOW, the contents of this SOW shall be the superseding requirements.

2.1 Military Standards

MIL-STD-129	DoD Standard Practice for Military Marking
MIL-STD-130	DoD Standard Practice Identification Marking of U S Military Property

2.2 Other Government Documents And Publications. The issues of these documents cited below shall be used.

TM 4750-15/1	Painting and Registration Marking for Marine Corps Combat and Tactical Equipment
TM 5-3805-261-34	Direct Support and General Maintenance for Grader, Heavy, Road, Motorized, Caterpillar Model 130G

TM 5-3805-261-24P	Unit, Direct Support, and General Support Maintenance and Repair Parts and Special Tools List
TM 5-3805-261-14&P-3	Maintenance Technical Manual for Grader, Heavy, Road, Motorized, Diesel Engine Driven
ATPD-2241	Vehicles, Wheeled: Preparation of Shipment and Storage of
DoD 4000.25-1-M	MILSTRIP Manual
TM 4795-34/2	Corrosion Prevention and Control
TM 9-2610-200-14	Care, Maintenance, Repair & Inspection of Pneumatic Tires and Inner Tubes
MI-09089-50/1	Installation of Laserplane Leveling System Motor Grader Installation Kit on Grader, Heavy, Motorized, Model 130G
MCO P4400.82	Regulated/Controlled Item Management Manual
Military Standards (For Guidance)	
MIL-HDBK-61	Configuration Management Guidance

2.3 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 Standards and Specifications are available from the DOD Single Stock Point, Document Automation 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., Albany, GA 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, GA 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 Grader, Heavy, Road, Motorized, Diesel Engine Driven. 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 Grader, Heavy, Road, Motorized, Diesel Engine Driven.

c. In-process and final on-site testing must be witnessed by Marine Corps Systems Command (MCSC), (Code CSLE-ENG), Albany, GA representative.

d. Be responsible for all structural, electrical and mechanical requirements associated with the restoration of the Grader, Heavy, Road, Motorized, Diesel Engine Driven.

3.2. IROAN Objective And Functions. After IROAN, the Grader, Heavy, Road, Motorized, Diesel Engine Driven 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 equipment systems and components shall operate as intended.

e. All Graders, Heavy, Road, Motorized, Diesel Engine Driven shall have a Like New appearance.

3.3. Detail Tasks. The following tasks describe the different phases for IROAN of the Grader, Heavy, Road, Motorized, Diesel Engine Driven.

Phase I	Pre-Induction
PhaseII	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 Grader, Heavy, Road, Motorized, Diesel Engine Driven, 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 located in Appendix A and shall be maintained and be made available upon request to MCSC (Code CSLE-ENG), Albany, Georgia representative.

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 IROAN Pre-Induction Checklist (Appendix A); during the 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 Grader, Heavy, Road, Motorized, Diesel Engine Driven, 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. Dynamometer Run In Schedule (Appendix B) for engine and transmission shall be completed, along with the Final Inspection Checklist (Appendix C) of this SOW.

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

a. Detailed Work. Grader, Heavy, Road, Motorized, Diesel Engine Driven received for IROAN shall be reworked in accordance with the following paragraphs. All discrepancies noted on the IROAN Pre-Induction Checklist shall be repaired/replaced.

b. Hardware.

(1) Replace broken, unserviceable and/or missing hardware including nuts, bolts, screws, washers, turnlock fasteners, safety 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 5-3805-261-24P.

NOTE

The requirement for separating the engine and transmission assemblies and running them on their independent dynamometers will be adhered to, unless during the Pre-Induction Inspection, a chassis dynamometer test was performed and the engine and transmission passed performance specifications. If engine or transmission fail to meet performance specifications, then procedures will be followed as written.

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. The engine assembly shall be separated from the transmission assembly. Carefully read "General Instructions" TM 5-3805-261-14&P-3. Follow all warnings and procedures to assure you are working with safe and efficient methods and conditions.

The engine assembly shall be attached to an engine dynamometer and the engine run-in test shall be performed at that time. Refer to paragraph 3.3.2.d for the test procedures for the fuel system which shall be tested in conjunction with the engine test.

The transmission shall be processed in accordance with paragraph 3.3.2.r.

Record all results of this test on the Dynamometer Run-in Schedule, (Appendix B). Dynamometer Run-in Schedule shall be maintained and be available to the MCSC (Code CSLE-ENG), Albany, Georgia representative.

Test the following in accordance with TM 5-3805-261-34 to conform inspection and testing procedures to assure full conformance with this SOW.

(2) PASS/FAIL. After the engine run test has been finished, the completed Engine Dynamometer Run-in Schedule shall be compared with the acceptable operating specifications for the Grader, Heavy, Road, Motorized, Diesel Engine Driven. The engine assembly shall meet or exceed the minimum specifications to be considered as having passed. In the event the engine assembly fails to meet the specifications, further tests shall be performed in accordance with the Engine Dynamometer Run-in Schedule.

Procedures for repair/replacement can be found in TM 5-3805-261-34.

d. Fuel System.

(1) Test Procedures. Test the following in accordance with TM 5-3805-261-34 to conform inspection and testing procedures to assure full conformance with this SOW. Test all fuel injectors during the dynamometer engine run-in test.

(a) Inspect the fuel pump assembly for loose or broken items and housing cracks. During the dynamometer engine run-in test, assure that the fuel pump is properly timed.

(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 do not pass the dynamometer engine run-in test.

(a) Repair/Replace any fuel pump assembly that does not pass the dynamometer engine run-in test.

(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, 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.

Repair/replacement procedures can be found in TM 5-3805-261-34.

e. Hydraulic System.

(1) Test Procedures. Hydraulic fluid test procedure. Repair/Replace any of the above listed items of the hydraulic/steering system that fails testing procedures as stated in TM 5-3805-261-34.

The hydraulic system on the Grader, Heavy, Road, Motorized, Diesel Engine Driven, is a closed center, constant pressure system. The Hydraulic/steering system consists of the following circuits:

(a) Variable Displacement Pump.

(b) Combination Valve (Relief Valve And Pressure Rediction Valve).

(c) Implement System.

(d) Control Valve for Implements.

(e) Implement Valve.

(f) Lock Check Valve.

(g) Blade Float Check Valve.

(h) Blade Float Pilot Valve.

(2) PASS/FAIL. Repair/Replace any of the above if fail test in accordance with TM 5-3805-261-34. Replace tube lines that are pinched or dented. 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 at junction of hose and 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.

Repair/replacement procedures can be found in TM 5-3805-261-34.

f. Cooling System.

The cooling system for the power unit consists of a radiator, water pump, one or two thermostats located in the same area and a water manifold. The purpose of the cooling system is to transfer heat from the engine to the radiator to dissipate the heat to the outside air. Coolant is circulated in the engine water jacket and through the radiator by the water pump. The radiator is of the centrifugal vane impeller type. The thermostat opens and closes to control the flow of coolant to the radiator. The hoses carry the coolant to and from the radiator.

(1) Test Procedures. Test the following in accordance with TM 5-3805-261-34 to conform to inspection and testing procedures to assure full conformance with this SOW. Inspect hose clamps for tightness.

(a) Inspect surge tank and cap for leaks.

(b) Inspect water manifold for leaks.

(c) Inspect thermostat housing for leaks.

(d) Inspect engine oil cooler for leaks.

(e) Inspect transmission oil cooler for leaks.

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

(g) Inspect water pump for leaks and cracks.

(h) Inspect fan clutch for unusual noises.

(i) Inspect radiator for cracks and leaks.

(j) Inspect fan shroud for cracks and holes.

(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.

Repair/replacement procedures can be found in TM 5-3805-261-34.

g. Axle Assemblies.

(1) Front Axle Assembly.

(a) Test Procedures. Test the following in accordance with TM 5-3805-261-34 to conform with inspection and testing procedures to assure full conformance with this SOW.

(1) Steering Arms

(2) Wheel Spindle, Bearing and Seals

(3) Leaning Wheel Mechanism

(4) Leaning Wheel Cylinder

(b) PASS/FAIL. After the Axle run test has been finished, the completed Engine Dynamometer Run-in Schedule shall be compared with the acceptable operating specifications for the Grader, Heavy, Road, Motorized, Diesel Engine Driven. The Axle Assembly shall meet or exceed the minimum specifications to be considered as having passed. In the event a part of the assembly fails to meet the specifications, further tests shall be performed.

NOTE

Repair/replacement procedures can be found in TM-5-3805-261-34.

(2) Rear Axle Assembly.

(a) Test Procedures. Test the following in accordance with TM 5-3805-261-14&P-3 to conform with inspection and testing procedures to assure full conformance with this SOW.

(1) Differential

(2) Differential Lock Control Valve

(3) Drive Axles

(4) Drive Sprockets

(5) Final Drive Assemblies

(6) Tandem Drive Housing Assembly

(7) Tandem Drive Chain Assembly

(b) Pass/Fail. After the axle run test has been finished, the complete Engine Dynamometer Run-In Schedule shall be compared with the acceptable operating specifications for the Grader, Heavy, Road, Motorized, Diesel Engine Driven. The Axle Assembly shall meet or exceed the minimum specifications to be considered as passed. In the event a part of the assembly fails to meet specifications, further test shall be performed.

Repair/replacement procedures can be found in TM 5-3805-261-34.

h. Suspension Section.

(1) Test Procedures. Inspect all shafts, universal joints, and yokes for cracks or bends.

(a) Inspect shock absorbers for leaks and bushing deterioration.

(b) Inspect springs (front and rear) for sagging.

(c) Inspect torque rods.

(2) PASS/FAIL. Repair/Replace all shafts that are cracked and bent. Repair/Replace universal joint, sliding couplings and universal joint bearings that show rotary lost motion when rotated or shaken by hand. Replace yokes when cracked.

(a) Replace shock absorber when bushings are leaking or deteriorated.

(b) Repair/Replace all springs that have taken a permanent set. All spring wear pads shall be removed and rotated 180 degrees. Repair/Replace any broken leaf springs.

Repair/Replacement procedures can be found in TM 5-3805-261-34.

i. Frame Section.

(1) Test Procedures. Inspect frame, side rails, engine mounts and cross members for loose mounting and broken welds.

(2) PASS/FAIL. Repair/Replace the frame, side rails, engine mounts and cross members that have loose mounting and broken welds.

Repair/replacement procedures can be found in TM 5-3805-261-34.

j. Cab Assembly, Glass, Windshield Wiper Assemblies, Towing Hooks, And Mirrors.

(1) Test Procedures.

(a) Inspect cab assembly, battery box, tool box, gas can bracket, cargo storage box and ventilation/heater for breaks, cracks and proper function. Doors, hood and hardware shall function as intended. Inspect hood and cab for damage. Inspect hood insulation for sagging and missing insulation. Remove all insulation from cab/floor and inspect for corrosion.

(b) Inspect glass for breaks and cracks.

(c) Inspect windshield wiper for proper function.

(d) Inspect towing hooks for security.

(e) Inspect mirror bracket for security.

(2) Pass/Fail. Dents not to exceed 7/16 inch are acceptable when alignments are not affected.

(a) Repair/Replace cab assembly that has cracks, breaks, corrosion, and missing, damaged hardware. Repair/Replace the tool box, tool bracket, gas can bracket and cargo storage box that has cracks, rust, breaks and missing/damaged hardware. Dents, sags and bulges in the floor that do not exceed 7/16 inch are acceptable. Doors, hood, closure and associated hardware shall function as intended. Indentations of no more than 1/2 inch are acceptable. The battery box shall be free of corrosion and acid deposits. Repair/Replace any ventilation/heater control cables, hoses, screens and doors that are ripped, torn and are not functioning properly. Repair/Replace the hood insulation if damaged, sagging or missing cab/floor insulation.

(b) Repair/Replace door and windshield glass that are cracked. Minor discoloration not more than 1 1/2 inches from the edge and on the right side of the windshield is acceptable. Scattered hairline scratches not within the driver's immediate vision are acceptable. Mounting and frames shall be secure. Seals shall be weather tight when this is the intended function. Slight weather cracking on rubber seals is acceptable.

(c) Replace wiper blades 100 percent. Repair/Replace wiper motor and wiper arms that do not function properly. Repair wiper hoses that leak (minor weather cracking is acceptable).

(d) Repair/Replace pintles and towing hooks that are not properly secured to vehicle. Cotter pin shall be attached and fastened properly. Towing hook shall be properly mounted. Pintles shall be lubricated and operate freely. End play in excess of 1/4 inch is not acceptable. Wear on pintle shaft or bushing, or both, to the extent of 1/8 inch is acceptable.

(e) Replace broken/missing mirrors. Mounting shall be secure. Adjustment features shall function properly. Mirrors shall match on both sides the vehicle.

Repair/replacement procedures can be found in TM 5-3805-261-34.

k. Cushion/Seat Pads and Back/Frames.

(1). Test Procedures. Inspect back/frames and tracks for damage, sagging, broken springs, deteriorated frames and proper function.

(2). PASS/FAIL. Replace cushion/seat pads 100 percent. Repair/Replace seat/backs, frames and tracks that have damaged, sagging, broken springs, deteriorated frames and tracks that do not operate properly.

Repair/replacement procedures can be found in TM 5-3805-261-34.

l. Rust Proofing And Painting (Exterior/Interior).

All vehicles shall be rust proofed as required. Rust proofing shall be in accordance with TM 4795-34/2.

Prime and paint per latest edition of TM 4750-15/1.

Do not steam clean operators station. Steam in this area will cause sereve damage to the vehicle control panel, heater assembly, operators seat and other similar components.

Procedures for corrosion prevention and control are in accordance with TM 4795-34/2.

All vehicles requiring repainting shall be painted with Chemical Agent Resistant Coating (CARC) paint. Painting is authorized 100 percent for corrosion control when the cost of touch up painting exceeds the cost of 100 percent painting. The painting of tires is not authorized. The removal of paint overspray from tires on vehicles received for IROAN is not required. Precautions shall be taken to prevent further paint overspray on tires.

m. Electrical System.

All vehicles for IROAN shall have hot batteries installed. Install batteries before testing the electrical system.

Two 12 volt batteries connected in series serve the 24 volt electrical system. The batteries are a wet-charge, lead-acid type and are located in a battery box on the right side deck.

(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.

(a) Instrument Panel Gauges for proper operation.

(b) Instrument Panel Warning Lights.

(c) Instrument Panel Light Mode Selection Switch.

(d) Instrument Under panel Relays.

(e) Hydraulic Pump Unloading Circuit.

(f) Emergency Steering Motor Circuit.

(g) Engine Start Circuit Breakers.

(h) Alternator and protective control box, with the proper test equipment.

(i) Inspect the headlights, blackout lights, turn signals, rear composite lights, side marker lights, reflectors, and instrument panel lights for cracks, corrosion, moisture, broken and blown bulbs.

(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.

(a) Replace any gauge or switch that does not function properly after assuring that the sending unit is not defective.

(b) Replace any wiring that is frayed or broken and correct moisture in the lighting system by replacing the light cover gasket.

(c) Replace any selection switch that isn't working properly.

(d) Replace all under panel relays that are not functioning properly.

(e) Repair/Replace hydraulic pump unloading circuit if not functioning properly.

(f) Repair/Replace the emergency steering motor circuit if not functioning properly.

(g) Repair/Replace engine start circuit breakers that are not functioning properly.

(h) Repair/Replace the starter, alternator and protective control box assembly that do not pass the pre-induction test. Install new dry batteries 100 percent.

(i) Replace any headlights, blackout lights, turn signals, rear composite lights, side marker lights reflectors and instrument panel lights that are blown out or broken.

Test/repair or replacement procedures can be found in TM 5-3805-261-34.

n. 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, burrs 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.

(2) PASS/FAIL. Repair/Replace cover plate assembly to ensure proper operation. Check TM 5-3805-261-34 for maximum warpage allowed on cover plate surface. Friction plate minimum wear limit thickness is found in TM 5-3805-261-34. 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.

Repair/replacement procedures can be found in TM 5-3805-261-34.

o. Brake System.

(1) Test Procedures.

(a) Inspect all brake disc, pads for wear and hoses for leaks.

(b) Inspect parking brake caliper and disc. for proper function.

(c) Inspect parking brake control valve.

(d) Inspect Accumulator for leaks.

(e) Inspect air reservoir tanks for leaks and rust.

(f) Inspect air bleeder valves, for leaks and proper operation.

(g) Inspect all air brake lines for cracks and leaks.

(h) Inspect seals and backup rings.

(i) Inspect circuit pressure.

(2) PASS/FAIL. Replace brake disc, pads and/or lining with 50 percent of original thickness remaining. Disc shall not be cracked or distorted. Replacement of seals on end caps and gas valve is recommended if replacement of piston v-o-ring is required in accumulator.

(a) Repair/Replace any of the above items that do not conform with the requirements found in TM 5-3805-261-34.

(b) Replace leaking or damaged brake hoses.

(c) The parking brake control valve shall be complete with all components and in serviceable condition and properly adjusted.

(d) Parking/hand brake lining shall have at least 50 percent of original thickness remaining or they must be replaced. No evidence of grease or oil shall be on the parking brake lining.

(e) Repair/Replace all air reservoir tanks showing evidence of leaks, cracks or other damage. Repair/Replace air reservoir tank support brackets that are cracked, broken or otherwise damaged.

(f) Replace brake lines if cracked or leaking. Brake lines will be of current diameter and length and free of kinks or flat sections. Fitting and nut shall not be distorted to the extent that they cannot be properly tightened.

(i) Replace front and rear glad hand grommets when they are hard, cracked or missing.

Repair/replacement procedures can be found in TM 5-3805-261-34.

p. Tires And Wheels.

(1) Inspection Procedures. The tire Inspection checklist contained in TM 9-2610-200-14 shall be used to document the tire inspection and shall be provided as part of the Pre-Induction Checklist. Inspect tires for correct inflation, cupping, chuncking, cuts and cracks. TM 9-2610-200-14, 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 non repairable 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. All wheels that do not meet these requirements shall be replaced.

(2) Pass/Fail. All tires shall meet classification code "B" as identified in TM 9-2610-200-14. Recapped tires are not permitted. 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.

Check TM 5-3805-261-34 for the appropriate tire size.

q. Steering Section.

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

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

(b) Inspect steering gear for leaks, damage, wear and proper function.

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

(d) Inspect upper and lower steering column assemblies for bends, breaks, cracks and wear.

(e) Inspect tubes for bends, breaks, cracks, deformities and excessive play.

(f) Inspect steering wheel for cracks.

(g) Inspect for proper alignment and lubrication.

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.

(a) Replace the power steering hoses if leaking.

(b) Repair/Replace the steering gear if damaged, worn, leaking and not functioning properly.

(c) Repair/Replace the power steering of cracks, kinks, leaking or flattened tubing.

(d) Repair/Replace the upper and lower steering column universal joints, couplings and universal joint bearings that show rotary lost motion when rotated or shaken by hand.

(e) Replace drag link, tubes that are bent, cracked and deformed. The steering mechanism shall operate without binding or roughness on the drag link and steering linkage.

(f) Repair/Replace steering wheel as required.

(g) Realigned and lubricated 100 percent.

Repair/replacement procedures can be found in TM 5-3805-261-34.

NOTE

No welding or straightening (hot or cold) shall be permitted on steering gear controls. Steering wheels with minor cracks 1/8 of an 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.

r. Transmission.

The 1724M Powershift Transmission is a forward and reverse transmission with 4 speeds in either direction. Forward motion, reverse motion and the speeds are obtained through the use of hydraulically actuated multiple disc clutches. These clutches are power absorbing members that can be engaged at full engine power. Shifting under full engine power makes these models a full power shift for the forward and reverse motion in all speeds.

(1) Test Procedures. After Pre-Induction Tests and Inspections have been completed, the power pack assembly shall be removed from the vehicle, cleaned and inspected for loose or missing items. The transmission assembly shall be separated from the engine assembly. The transmission assembly shall be attached to a transmission dynamometer and the transmission

dynamometer tests shall be performed at this time. All applicable data shall be recorded on the Dynamometer Run Sheet (Appendix B). The Dynamometer run sheet shall be maintained and be available to MCSC (Code CSLE-ENG), Albany, Georgia representative. Test in accordance with TM 5-3805-261-34 to conform with inspection and testing procedures to assure full conformance with this SOW.

(a) Inspect the transmission converter for proper function.

(b) Inspect the transmission for Position Control Valve.

(c) Inspect the Primary Pump.

(d) Inspect the Front Cover.

(e) Inspect the Clutch Stack.

(f) Inspect the Main Case.

(g) Inspect the Mount Cover.

(h) Inspect transfer shift lever and linkage for proper operation.

(i) Inspect the transfer mounts for deterioration.

(j) Inspect transfer control valve for proper operation.

(k) Inspect the transfer output shaft for excessive up and down play.

(2) PASS/FAIL. Upon completion of the transmission assembly dynamometer run-in test, the data recorded shall be compared with the required specifications. The transmission assembly shall meet or exceed the minimum specifications to be considered as having qualified for reinstallation. In the event the transmission fails the testing, it shall be repaired prior to installation. The transmission oil, filter, and oil pan gasket shall be replaced.

(a) Repair/Replace the transmission converter as required to ensure proper function.

(b) Repair/Replace the transmission linkage assembly if it does not operate smoothly. Replace all broken cables. If any of the above is not repairable, then summit a recoverable item report per MCO P4400.82 to the appropriate item manager (Code 577-1) for action.

Repair/replacement procedures can be found in TM 5-3805-261-34.

s. Data Plates And Decals.

Each IROANed Grader, Heavy, Road, Motorized, Diesel Engine Driven shall have an IROAN data plate affixed next to the existing data plate. The data plate shall meet the requirements of MIL-STD-130 and TM 4750-15/1.

(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 facility and contain the following information:

VEHICLE SERIAL NO._____
REPAIRED IN ACCORDANCE WITH SOW-04-CSLE-09089B-2/1
CONTRACTOR FACILITY_____
DATE_____.
HOUR METERING READING AT TIME OF IROAN_____.

NOTE

Hour meters on vehicles IROANED under provisions of this SOW shall not be turned back to zero.

Position the IROAN data plate next to the original vehicle data plate.

RECORD JACKET: Record all major equipment or components serial numbers that are replaced in the record jacket of the Grader, Heavy, Road, Motorized, Diesel Engine Driven. (This includes engines, transmissions, etc.).

3.3.3 PHASE III - INSPECTION, TESTING AND ACCEPTANCE.

a. Inspection, testing and acceptance of the Grader, Heavy, Road, Diesel Engine Driven, shall be conducted in accordance with TM 5-3805-261-34.

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

c. The Contractor shall be responsible for correcting any deficiencies identified during inspection/testing. MCSC (Code CSLE-ENG), Albany, Georgia 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 Grader, Heavy, Road, Diesel Engine Driven, repaired under the provisions of this SOW shall be accomplished in accordance with TM 5-3805-261-34 and this SOW.

3.3.4 Phase IV - Packaging, Handling, Storage, And Transportation (PHS&T).

a. The Contactor 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 in accordance with the level "A" requirements of ATDP-2241. Items scheduled for domestic shipment for immediate use or shipment to overseas destinations with the exception of Maritime Pre-positioned Forces (MPF), shall be level "B", 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 MPS shall be level "B", MPS Modified Drive-Away.

b. 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 vehicle electrical system. Terminals and leads shall be taped. Fuel tank shall be filled ¼ full of JP 5/8. The air intake system, exhaust and brake systems, drive-train and gauges shall be depreserved.

(2) MPF Modified Drive Away - Batteries shall be hot and connected to vehicle electrical system. Fuel tank shall be filled 3/4 full of JP 5/8 with additives. The air intake system, exhaust and brake systems, drive-train and gauges are to be depreserved. Fire extinguisher bracket and 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 shipping address(es) for delivery of repaired equipment. The Contractor shall be responsible for arranging for shipment of the equipment to the pre-designated site(s). 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. Modification Instruction (MI) 09089-50/1 is installed on some but not all vehicles. Vehicles with this modification may be inducted for IROAN under provisions of this SOW. Components identified as parts of this modification will not be removed or repaired under provisions of this SOW. The Circle Rotation Sensor will not be CARC painted. Circle Rotation

Sensor shall not be removed unless repairs are required to the Circle Rotation Assembly. Contractor facility shall notify Marine Corps System Command, Logistics Management Specialist, Attn: (Code CSLE-ENG), 814 Radford Blvd., Suite 20320, Albany Georgia 31704-0320, commercial telephone number (229) 639-6533 or DSN 567-6533, of any vehicles inducted into the contractor facility with this MI applied.

b. 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 inspection checklist to the contractor. The contractor shall use one checklist for the Grader, Heavy, Road, Diesel Engine Driven, to record the inspection findings along with other required data.

c. The contractor shall record serial numbers of the assemblies listed on the configuration inspection checklist.

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 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 Acitivity (MCA/Code 573-2) will coordinate Government Furnished Equipment/Government Furnished Material (GFE)/(GFM) request and maintian a central control system on all GFE Accountability Agreements 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 (Material 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 material 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 material and the required completion/delivery date.

3.7 Quality Assurance Provisions. The performances of the Contractors and the quality of work delivered, material provided and documents written shall be subject to in-process review and inspection by the Logistics Management Specialist and/or their representative(s) during contract performance. Inspection may be accomplished at any work location. Authorized MCSC (Code CSLE-ENG), Albany, Georgia representative shall be permitted to observe the work/task accomplishment or to conduct inspections at all reasonable hours within Contractors normal working hours. Acceptance tests shall be held in-plant. Inspection by MCSC, (Code CSLE-

ENG), Albany, Georgia representative 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.

The Contractor shall provide and maintain a Quality System that, as a minimum, adheres to the requirements of ANSI/ISO/ASQC Q9002-1994 Quality System-Model for Quality Assurance in Production, Installation, and Servicing. The Contractor work shall be subject to in-process reviews and inspections for compliance with Quality Systems by MCSC (Code CSLE-ENG), Albany, Georgia representative. Noncompliance with 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 MCSC (Code CSLE-ENG), Albany, Georgia representative's inspection, it shall be the Contractor's responsibility to ensure that the entire system meets the performance requirements delineated and addressed in the Grader, Heavy, Road, Diesel Engine TM 5-3805-261-34 and this SOW.

Quality assurance operations performed by the Contractor shall be subject to the MCSC (Code CSLE-ENG), Albany, Georgia representative verification at any time. MCSC (Code CSLE-ENG), Albany, Georgia representative verifications 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 Grader, Heavy, Road, Diesel Engine Driven, this SOW and applicable documents used herein.

d. Failure of the Contractor to promptly correct deficiencies discovered, shall be a reason for suspension of acceptance until corrective action has been made.

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-ENG), Albany, GA., representative 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 Facility. Final acceptance shall be conducted on 100 percent of items to verify that the units meet all requirements.

The Grader, Heavy, Road, Motorized, Diesel Engine Driven vehicles IROANED under the provisions of this SOW shall be accomplished in accordance TM 5-3805-261-34 and provisions of this SOW.

3.9 Rejection. Failure to comply with any of the specified requirements listed herein shall be reason for rejection by MCSC (Code CSLE-ENG), Albany, GA., representative. The contractor shall, at no additional cost to MCSC (Code CSLE-ENG), Albany, GA., 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. The following reports shall be provided to the MCSC, (Code CSLE-ENG), Albany, Georgia representative. Reports shall be forward to: Marine Corps Systems Command, (Code CSLE-ENG), Suite 20320, 814 Radford Blvd., Suite 20320, Albany, Georgia 31704-0320.

4.1 Pre-Induction Checklist. The Contractor shall complete the Pre-Induction Checklist (Appendix A) for each Grader, Heavy, Road, Motorized, Diesel Engine Driven repaired. These documents shall be available during final acceptance testing. One copy of each document shall be provided to MCSC, Code CSLE-ENG, Albany, GA., after final acceptance of the Grader, Heavy, Road, Motorized, Diesel Engine Driven or upon request.

4.2 Dynamometer Run-In Schedule. The contractor shall provide one copy, per vehicle, of Dynamometer Run-In Schedule (Appendix B), test results performed on the engine during the pre-induction Phase. Also provide one copy, per vehicle, of the Dynamometer Run In Schedule MT-654 Transmission, test results, performed on the transmission. If either the engine or transmission fails the Dynamometer Run In Schedule requirements, it must be repaired/rebuilt and a final Dynamometer test performed under the terms of this SOW. These sheets shall be available for review during the final acceptance testing and shall be sent to MCSC, Code CSLE-ENG, Albany, Ga., upon acceptance of vehicle or upon request.

4.3 Final Inspection Checklist. The contractor shall provide one copy, per vehicle, of the Final Inspection Checklist (Appendix C.). These sheets shall be available for review during the final acceptance testing and shall be sent to MCSC, Code CSLE-ENG, Albany, Ga., upon acceptance of vehicle or upon request.

PRE-INDUCTION CHECKLIST

Vehicle Serial Number _____
Vehicle Hours _____

	Pass	Fail	Remarks
1. Body and Cab. Inspect for serviceability Note broken or missing parts, rust or corrosion	_____	_____	_____
2. Cab Doors. Inspect for damage, miss-Alignment, rust, or corrosion. Ensure all seals and doors are serviceable.	_____	_____	_____
3. Vehicle Frame. Visually inspect frame, cross-members. and under body for bends, broken welds, and corrosion.	_____	_____	_____
4. Rubber Insolators. Inspect for tears, cracks, bent or broken hardware.	_____	_____	_____
5. Cab Mounts. inspect for loose or broken welds and rusted conditions.	_____	_____	_____
6. Access Panels. Check all covers for damage or cracks. Check all cap screws for tightness.	_____	_____	_____
7. Cab/Vehicle Step. Inspect for loose mounting hardware, distortion, wear and cracks.	_____	_____	_____
8. Glass.	_____	_____	_____

Inspect all glass for distortion wear, cracks and pitting.

	Pass	Fail	Remarks
9. Towing Connections. Inspect for loose mounting hardware and damage.	_____	_____	_____
10. Headlights. Inspect for loose mounting hardware, loose electrical connections and damage. Ensure Serviceability.	_____	_____	_____
11. Lights. Inspect all other lights for loose mounting hardware, loose connections, burned out bulbs, or broken lens. **Note** location in "Remarks" column.	_____	_____	_____
12. Tires. Inspect ALL tires ***Condition as per TM9-2610-200-14***	_____	_____	_____
13. Wheels. Inspect all wheels for broken, cracked, or bent surfaces. Ensure that the side ring and clamp plate are serviceable and fit securely in their grooves. **Note** location of defective Parts in "Remarks" column.	_____	_____	_____
14. Wheel Studs and Nuts. Check all wheel studs, nuts, and inspect for missing nuts. Inspect wheel spindles and wheel housings. **Note** location of defective parts	_____	_____	_____

in "Remarks" column.

	Pass	Fail	Remarks
15. Undercarriage and Frame. Inspect under vehicle for fuel, oil, and cooloant leaks. Inspect for missing, broken, of leaking suspension and drive train parts.	____	____	____
16. Transmission. Inspect for cracks, leaks, or damage. Check shift cable for kinks and excessive play. Inspect transmission oil pan bolts for looseness and out put shaft seal for damage or leaks.	____	____	____
17. Transfer Case. Inspect transfer case for leaks, cracks, damage, and loose bolts. Inspect oil seals for damage or leaks. Inspect transfer shift cable.	____	____	____
18. Front Axle. Inspect for loose cap screws and leaking seals. Inspect body for damage, or leaks.Inspect pivot poit for damage.	____	____	____
19. Service Brake System. Inspect brake lining and brake disc for grooves and uneven wear. **Note** location of defective Item in remarks column.	____	____	____
20. Brake Chambers. Inspect the spring brake chambers for serviceability. Inspect for loose or damaged air lines to chambers.	____	____	____
21. Hydraulic Lines and Hoses. Inspect for breaks, cracks or leaks.	____	____	____

	Pass	Fail	Remarks
22. Air Tanks. Inspect all tanks for serviceability.	_____	_____	_____
23. Relay Valve. Inspect for serviceability.	_____	_____	_____
24. Suspension System. Inspect all components and hardware for cracks, breaks, leaks or looseness. **Note** location of defects in "Remarks" column.	_____	_____	_____
25. Steering System & Components.			
a. Check Steering system U-joints and shafts for breaks, cracks, rust or excess wear.	_____	_____	_____
b. Check steering gear mounting bolts for looseness. Inspect gear box for leaks.	_____	_____	_____
c. Inspect all linkages and rods and components for bends, breaks or loose mounting hardware.	_____	_____	_____
d. Inspect **ALL** hydraulic Steering lines/hoses and tubes for looses fittings and leaks. **Note** location of defects in "Remarks" column.	_____	_____	_____
26. Wheel Lean. Inspect all wheel lean components for malfunction or defective parts. **Note** location of defective parts in "Remarks" column.	_____	_____	_____
27. Scarifier Block. Inspect ALL components for Malfunction or defective parts. **Note** location of defective parts in "Remarks" column.	_____	_____	_____

	Pass	Fail	Remarks
28. Scarifier Sleeve and Link Assembly. Inspect **ALL** Components for malfunction of defective parts. **Note** location of defective parts in "Remarks" column.	_____	_____	_____
29. Scarifier Drawbars. Inspect **ALL** Components for malfunction of defective parts **Note** location of defective parts in "Remarks" column.	_____	_____	_____
30. Drawbar Ball and Socket. Inspect **ALL** Components for malfunction of defective parts **Note** location of defective parts in "Remarks" column.	_____	_____	_____
31. Mold Board. Inspect wear strips and ALL hardware and components. **Note** location of defective parts in "Remarks" column.	_____	_____	_____
32. Blade Cylinder Sockets. Inspect **ALL** Components for malfunction of defective parts **Note** location of defective parts in "Remarks" column.	_____	_____	_____
33. Blade Lift Cylinder. Check Ball and Socket joint inserts. Inspect cylinders For leaks, damage or any problems that would prevent cylinder operation.	_____	_____	_____
34. Blade lift Arms and Bar. Inspect for wear or defects that would prevent propper operation.	_____	_____	_____

	Pass	Fail	Remarks

35. Blade Sideshift Cylinder. Inspect **ALL** Components for malfunction of defective parts **Note** location of defective parts in "Remarks" column.	____	____	_____
36. Blade Centershift Cylinder. Inspect **ALL** Components for malfunction of defective parts **Note** location of defective parts in "Remarks" column.	_____	_____	_____
37. Blade Tip Cylinder. Inspect **ALL** Components for malfunction of defective parts **Note** location of defective parts in "Remarks" column.	_____	_____	_____
38. Blade Assembly. Inspect **ALL** Components for malfunction of defective parts **Note** location of defective parts in "Remarks" column.	_____	_____	_____
39. Circle Draw Bar And Components. Inspect **ALL** Components for malfunction of defective parts **Note** location of defective parts in "Remarks" column.	_____	_____	_____
40. Circle Drive Motor. Inspect for worn brushes, bearings, seals, or any other problems that might cause problems with its proper operation.	_____	_____	_____
	Pass	Fail	Remarks

	Pass	Fail	Remarks
41. Circle Drive Gear Box. Inspect for any leaking seal, worn bearings or gears ,cracked housing or gasket leaks.	_____	_____	_____
42. Engine. Inspect **ALL** Components for malfunction of defective parts **Note** location of defective parts in "Remarks" column.	_____	_____	_____
43. Cooling System. Inspect **ALL** Components for malfunction of defective parts. Including water pump, radiator, radiator cap, and thermostats. Replace all hoses. **Note** location of defective parts in "Remarks" column.	_____	_____	_____
44. Electrical System. Inspect all componenets Charging System, Starting System, Monitoring System, Wiring Harness, and all other wiring in electrical system.	_____	_____	_____
45. Fuel System. Rebuild Governor and Fuel Injection Pump. Replace Nozzles and **ALL** Fuel Lines. Rebuild Fuel Transfer Pump. Inspect Fuel Cell and replace all Gasket and seals, and replace fuel supply line.	_____	_____	_____
46. Charging System. Rebuild Alternator. Replace all wiring in charging system.	_____	_____	_____

47. Starting System. _____ _____ _____
Rebuild Starter. Replace Starter Solenoid.

48. Electrical Monitoring System. _____ _____ _____
Inspect Entire Monitoring System including Panel. Repair or replace as necessary. **Note** location of defective parts in "Remarks" column.

49. Transmission and Differentual. _____ _____ _____
Inspect **ALL** Components for malfunction of defective parts **Note** location of defective parts in "Remarks" column.

50. Tandem Drives. _____ _____ _____
Inspect **ALL** Components for malfunction of defective parts **Note** location of defective parts in "Remarks" column

51. Cooler Pump and assembly. _____ _____ _____
Inspect **ALL** Components for malfunction of defective parts, replace all hoses and fittings. **Note** location of defective parts in "Remarks" column.

52. Engine. _____ _____ _____
Excercise, Inspect and test all componenets and assemblies to ensure proper operation. Replace all hoses **Note** location of defective parts in "Remarks" column.

Dynamometer Run-In Schedule

	Test	Spec
Spec. no.	OT-4603	OT-4603
Arrgmt. no.	SR-7277	SR-7277
Corr Fl Pwr	162 R	148 hp
Speed	2199	2200 rpm
Cor Fl Rat	8.3 R	8.2 Gal/hr
CSPC	.387	.381 lb/hp-hr
Adj Boost	31.0	30.2 in. hg
Fuel Press		35 psi
Oil Press	65	61 psi
Tq cor F rat	6.0	gal/hr
Tq ck CSFC		lb/hp-hr
Tq ck adj bgt		in hg
Tq ck Spd	1402	1400 rpm
Tq ck cor tq	437	423 lb/ft
LI speed	977	970 rpm
LI oil press	37	33 psi
Hi speed	2332	2346 rpm
Response Time		
Fl St E Set	.043 R	.043 in
Ft St F Set	.000	.000 in
Timing BTDC		Deg
FLS (intrcpt)		
FTS (slope)		

(R= Reset Information)

FINAL INSPECTION CHECKLIST

Vehicle Serial Number _____
Vehicle Hours _____

Grader, Heavy, Road, Motorized Diesel Engine Driven	SAT	SERVICE	TESTED	LUBRICATED	UNSAT	REMARKS
1. **Engine Assembly** Condition Operation Leakage Mounting **Paint** Spec. Comformance Coverage **Lubrication** Aplication and Type Level **Oil Filters Replaced 100 Percent?** **YES _____ NO _____**						
2. **Fuel System** Condition Operation Leakage Mounting **Components** 1. Injectors and Injector Lines 2. Fuel Tranfer Pump 3. Fuel Tank 4. Fuel Supply Lines and Hoses **Fuel Filters Replaced 100 Percent?** **YES _____ NO _____** 1						
3. **Engine Cooling System** Condition						

Operation Leakage Mounting **Components** 1. Radiator 2. Water Inlet Manifold 3. *Fan Assembly* 4. Water Pump Assembly 5. Fan Shroud **Cooling System Protected To AT Least -20 F.** **YES _____ NO _____**						
4. **Alternator** Condition Operation Mounting						
5. **Engine Starter** Condition Operation Mounting						
6. **Vehicle Electric System** Condition Operation Mounting **Components** 1. Vehicle Driving Lights 2. Monitoring Panel 3. Wiring Harnesses 4. Slaving Receptacle *5. Fuses and Circuit Breakers* 6. Batteries and Cables 7. Switches 8. Heater Fan Assembly and Controls 9. Defrost Fan Assemblies *10. Front and Rear Windshield* Wiper assemblies. 11. Vehicle Work Lights **Windshield Wiper Blades Replaces 100 Percent?** **Yes _____ NO _____**						
7. **Vehicle Transmission** Condition Operation Mounting						

Leakage **Oil Filters Replaced 100 Percent** **YES _____ NO _____**						
8. **Drive Shaft and Housing** Condition Operation Mounting						
9. **Tandem Drive Assemblies** Condition Operation Mounting Leakage						
10. **Front Axle Assembly** Condition Operation Mounting						
12. **Tires and Wheels** Condition Mounting						
13. **Vehicle Brakes** Condition Operation **Components** 1. Service Brakes 2. Parking Brakes						
14. **SuspensionSystem** Condition Operation						
15. **Air Compressor and Air System** Condition Operation Leakage **Components** Compressor Hoses and Lines Brake Chambers Air Tanks						
16. **Vehicle Cab Assembly** Condition Mounting **Components** 1. Cab Doors and Door Hardware						

2. Cab Steps 3. Vehicle Glass 4. Windshield Wiper Assemblies 5. Operators Seat 6. Rear View Mirrows and Mounting Hardware 7. Steering Console						
17. **Vehicle Panels and Covers** Condition Mounting **Components** 1. Battery Box 2. Access Panels 3. Guage Vandalism Guard 4. Hydraulic Drive Shield 5. Hood and Mounting Assy 6. Engine Side Panels and Covers 7. Tool Box 8. Scarifier Stowage Box 9. Rear Bumper 10. Vehicle Frame						
18. **Vehicle Steering System** Operation Mounting Leakage **Components** 1. U Joints and Shafts 2. Steering Gear 3. Hydraulic Hoses and Lines.						
19. **Wheel Lean Assembly** Operation Mounting Leakage						
20. **Vehicle Hydraulic System** Operation Leakage **Hydraulic Filters Replaced 100 Percent?** **YES ____ NO ____**						
21. **Scarifier Assembly** Operation Mounting **Components**						

1. Scarifier Block 2. Scarifier Sleeve and Link 3. DrawBars 4. Drawbar Ball and Socket						
22. **Blade Assembly** Operation Mounting Leakage **Components** 1. Mold Board 2. Blade 3. Blade Lift Arms and Bar 4. Shideshift Cylinder 5. Centershift Cylinder 6. Roll Cylinder 7. Circle Drive Motor 8. Drawbar Assembly 9. Circle Assembly 10. Circle Drive Swivel Assy 11. Centershift Lock Assy						
23. **Engine Accessories** **a. Cold Start Assembly** Condition Hoses and Lines Mounting **b. Air Cleaner Assembly** Condition Mounting Hoses **c. Exhaust System** Condition Mounting **Air Filters Replaced 100 Percent?** **YES ____ NO ____**						
24. **Vehicle Paint** Condition Coverage Spec. Conformance						
25. **Vehicle Data Plated and Decals** Condition Marking						

IROAN Data Plate Installed? **YES _____ NO _____**						

CONTRACT DATA REQUIREMENTS LIST

(1 Data Item)

Form Approved
OMB No. 0704-0188

The public reporting burden for this collection of information is estimated 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 the burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0701-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. Please DO NOT RETURN your form to the above address. Send completed form to the Government Issuing Contracting Officer for the Contract/PR No. listed in Block E.

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

D. SYSTEM/ITEM	E. CONTRACT/PR NO.	F. CONTRACTOR
Grader, Heavy, Road, Motorized, DED		

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE	17. PRICE GROUP
A001	Request For Deviation	Configuration Management	

4. AUTHORITY (Data Acquisition Document No.)	5. CONTRACT REFERENCE	6. REQUIRING OFFICE	18. ESTIMATED TOTAL PRICE
DI-CMAN-80640C	SOW 3.4.2	MCLBA (583)	

7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION
LT		ASREQ	SEE BLK 16

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

14. DISTRIBUTION

a. ADDRESSEE	b. COPIES Draft	Final Reg	Final Repro
MCLBA (583-1)	0	1	0
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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

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

G. PREPARED BY	H. DATE	I. APPROVED BY	J. DATE
Cobb Pitts	1-11-02	James C. Coleman	02010

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