5. Construct fuel dispensing assembly (mission dependent).
6. Construct fuel receiving assembly (mission dependent).
7. Ensure environmental control devices are properly placed.
8. Ensure repair devices are properly placed.
9. Ensure interface devices are properly placed.
10. Ensure firefighting equipment is properly placed.
11. Ensure quality control measures are in compliance.
12. Ensure grounding rods/cables are properly installed.
13. Set-up inventory control procedures.
14. Dispense fuel as required.
15. Receive fuel resupply as required.
16. Produce reports as required.
17. Recover system as required.

**REFERENCES:**
1. FM 10-69 Petroleum Supply Point Equipment and Operations
2. MCWP 4-11 Combat Service Support
3. MCWP 4-11.6 Bulk Liquid Operations
4. MCWP 4-11.6 Petroleum and Water Logistics Operations
5. MIL HDBK 200 Quality Surveillance Handbook for Fuels, Lubricants, and Related Products
6. NAVAIR 00-80T-109 Aircraft Refueling NATOPS Manual
7. TM 3835-OI/1A Marine Corps Tactical Fuel Systems

**SUPPORT REQUIREMENTS:**

**RANGE/TRAINING AREA:** Facility Code 17933 POL Training Area

**EQUIPMENT:** Bulk Petroleum equipment, PPE

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**FUEL-XENG-3702:** Store Petroleum, Oil and Lubricants (POL)

**SUPPORTED MET(S):** 7

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**DESCRIPTION:** A broad term that includes all petroleum and associated products used by the U. S. Armed Forces. Storage in a warehouse of supplies and equipment in large quantities, usually in original containers, as distinguished from bin storage. Storage of liquids, such as petroleum products in tanks, as distinguished from drum or packaged storage.

**CONDITION:** Given commander's intent, concept of operations, warning order, fragmentary order, logistic requirements, POLs, equipment, personnel, and references,

**STANDARD:** to ensure appropriate Petroleum, Oils and Lubrication (POL) support, in accordance with the concept of operations.

**EVENT COMPONENTS:**
1. Provide POL Consumption Estimates to Higher Headquarters
2. Collate POL Requirements
3. Prepare Preliminary Environmental Assessments
4. Analyze POL Factors Affecting Operations and Exercise

**REFERENCES:**
1. FM 10-69 Petroleum Supply Point Equipment and Operations
2. MCWP 4-11.6 Bulk Liquid Operations
3. NAVAIR 00-80T-109 Aircraft Refueling NATOPS Manual
4. NAVAIR 00-80T-115 Expeditionary Airfield NATOPS Manual
5. TM 3835-OI/1A Marine Corps Tactical Fuel Systems

**SUPPORT REQUIREMENTS:**

**RANGE/TRAINING AREA:** Facility Code 17933 POL Training Area

**EQUIPMENT:** Bulk Fuel equipment, PPE

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**FUEL-XENG-3703:** Provide Tactical Bulk Petroleum storage

**SUPPORTED MET(S):** 7

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**DESCRIPTION:** Provide Tactical Bulk Fuel Storage.

**CONDITION:** Provided an operations order, petroleum products, bulk petroleum storage equipment, personnel, safety equipment, and references.

**STANDARD:** To ensure the physical inventory falls within allowances in local SOPs (product losses to not exceed allowable limits) and losses to be properly documented.

**EVENT COMPONENTS:**
1. Inventory stored fuel as required.
2. Test stored fuel for quality control measures as required.
3. Measure fuel by metering or estimate gauging.
4. Submit reports as required.

**REFERENCES:**
1. DOD 4140.25 Management of Bulk Petroleum Products, Storage and Distribution Facilities
2. FM 10-67-2 Petroleum Laboratory Testing and Operations
3. FM 10-69 Petroleum Supply Point Equipment and Operations
4. MCO 4400.170 Control and Accounting for Petroleum and Related Products
5. MCWP 4-11.6 Bulk Liquid Operations
6. NAVAIR 00-80T-109 Aircraft Refueling NATOPS Manual
7. TM 3835-OI/1A Marine Corps Tactical Fuel Systems

**SUPPORT REQUIREMENTS:**

**RANGE/TRAINING AREA:** Facility Code 17933 POL Training Area

**EQUIPMENT:** Bulk Fuel equipment, PPE

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**ENGR-MANT-3701:** Employ maintenance team

**SUPPORTED MET(S):** 2

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**CONDITION:** With equipment, tools, repair parts, supplies, personnel and references.

**STANDARD:** To ensure equipment is in operational condition to support mission requirements.

**EVENT COMPONENTS:**
1. Coordinate with supported unit.
2. Determine personnel, tool, and equipment requirement(s).
3. Determine maintenance support requirement.
4. Conduct Limited Technical Inspection (LTI).
5. Repair equipment as required.
6. Recover and evacuate as required.
7. Submit required reports.

**REFERENCES:**
1. MCO 3000.11_ Marine Corps Ground Equipment Resources Reporting
2. MCO 4610.35 USMC Equipment Characteristics File
3. MCO 4731.1A Oil Analysis Program for Ground Equipment (Nov 90)
4. MCO 4733.1B Marine Corps Test, Measurement, and Diagnostic Equipment (TMDE) Calibration and Maintenance Program (CAMP) (Jun 99)
5. MCRP 3-17B Engineer Forms and Reports
6. MCWP 4-11.4 Maintenance Operations

**SUPPORT REQUIREMENTS:**

**RANGE/TRAINING AREA:** Facility Code 17420 Maneuver/Training Area, Heavy Forces

**EQUIPMENT:** Maintenance Contact vehicle and equipment, PPE

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**ENGR-RECN-3701:** Assess damage to airfield surfaces

**SUPPORTED MET(S):** 2, 4

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**DESCRIPTION:** Surface defects can usually be attributed to excessive loads, inferior surfacing material, poor sub-grade or base conditions, inadequate drainage, or a combination of these conditions. Surface inspections should include a complete inventory of the current pavement defects. Careful investigation of the causes of the defects will allow for timely maintenance to prevent the pavement defects from requiring repair.

**CONDITION:** Given a tactical situation, a forward operating base to be repaired, an operations order, commander's intent, personnel, equipment, and references.

**STANDARD:** To restore the forward operating base to optimum operational capability to reestablish surface roughness criteria in order to establish a functional Minimum Operating Strip (MOS) capable of launching and recovering aircraft.

**EVENT COMPONENTS:**
1. Coordinate with supported unit.
2. Coordinate with supporting unit (EOD).
3. Determine personnel, tool, and equipment requirement(s).
4. Proceed to assigned objective.
5. Reconnoiter damaged airfield surface as required.
6. Determine the type and extent of repair required.
7. Once airfield commander has selected an MOS, have EOD clear UXO.
8. Determine material required to complete the repair.
9. Issue the repair order.
10. Inspect completed repair.
11. Submit appropriate engineer reports.

**REFERENCES:**
1. FM 5-430-00-1, Volume 1 Planning and Design of Roads, Airbases, and Heliports in the Theater of Operations
2. FM 5-430-00-2 Planning and design of roads, airfields, and heliports in the theater of operations--Airfield and Heliport design
3. MCRP 3-17B Engineer Forms and Reports
4. MCWP 3.21.1 Aviation Ground Support

**SUPPORT REQUIREMENTS:**

**RANGE/TRAINING AREA:** Facility Code 17918 Road/Airfield Construction Training Site

**EQUIPMENT:** Engineer equipment, PPE

**UNITS/PERSONNEL:** EOD personnel

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**ENGR-MOBL-3601:** Employ a medium machinegun team

**SUPPORTED MET(S):** 2

**EVALUATION-CODED:** YES **SUSTAINMENT INTERVAL:** 3 months

**DESCRIPTION:** Employ a medium machinegun in a mounted position in support of mobility requirements.

**CONDITION:** Given an operations order, a medium machinegun team, mounted, sectors of fire, targets, FPF, and while wearing fighting loads.

**STANDARD:** To support the scheme of maneuver.

**EVENT COMPONENTS:**
1. Coordinate with supported unit.
2. Emplace/mount the weapon.
3. Engage targets.
4. Control fires as directed.
5. Displace according to scheme of maneuver.
6. Prepare for follow-on missions.

**REFERENCES:**
1. MCWP 3-1 Ground Combat Operations
2. MCWP 3-15.1 Machine Guns and Machine Gun Gunnery

**SUPPORT REQUIREMENTS:**

**ORDNANCE:**

| DODIC | Quantity |
|---|---|
| A111 Cartridge, 7.62mm Blank M82 Linked | |
| A151 Cartridge, 7.62mm 4 Ball/1 Tracer Li | |

**RANGE/TRAINING AREA:**
Facility Code 17580 Machine Gun Transition Range
Facility Code 17581 Machine Gun Field Fire Range

**UNITS/PERSONNEL:** Range Safety officer, Corpsman

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**ENGR-MOBL-3602:** Employ a heavy machinegun team

**SUPPORTED MET(S):** 2

**EVALUATION-CODED:** YES **SUSTAINMENT INTERVAL:** 3 months

**DESCRIPTION:** Employ a heavy machinegun in a mounted position in support of mobility requirements.

**CONDITION:** Given an operations order, a heavy machinegun team, mounted, sectors of fire, targets, FPF, and while wearing fighting loads

**STANDARD:** To support the scheme of maneuver.

**EVENT COMPONENTS:**
1. Coordinate with supported unit.
2. Emplace/mount the weapon.
3. Engage targets.
4. Control fires as directed.
5. Displace according to scheme of maneuver.
6. Prepare for follow-on missions.

**REFERENCES:**
1. MCWP 3-1 Ground Combat Operations
2. MCWP 3-15.1 Machine Guns and Machine Gun Gunnery

**SUPPORT REQUIREMENTS:**

**RANGE/TRAINING AREA:**
Facility Code 17580 Machine Gun Transition Range
Facility Code 17581 Machine Gun Field Fire Range

**UNITS/PERSONNEL:** Range Safety officer, Corpsman

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**ENGR-CMOB-3601:** Construct demolition obstacles

**SUPPORTED MET(S):** 3

**EVALUATION-CODED:** YES **SUSTAINMENT INTERVAL:** 3 months

**DESCRIPTION:** Employ improvised anti-personnel and anti-tank mines as explosive obstacles.

**CONDITION:** Given an operations order, personnel, demolitions material, engineer equipment, and while wearing fighting load.

**STANDARD:** To support the defensive concept of operations.

**EVENT COMPONENTS:**
1. Coordinate with supported unit.
2. Prepare site.
3. Build the explosive obstacle.
4. Submit required reports.

**REFERENCES:**
1. FM 20-32 Mine/Countermine Operations
2. FM 3-06 Urban Operations
3. FM 3-34.210 Explosive Hazard Operations
4. FM 3-34.214 Explosives and Demolitions
5. FM 5-100 Engineers in Combat Operations
6. FM 5-102 Countermobility
7. FM 5-170 Engineer Reconnaissance
8. FM 5-250 Explosives and Demolitions
9. FM 5-36 Route Reconnaissance and Classification
10. FM 90-1 Countermobility
11. FM 90-7 Combined Arms Obstacle Integration
12. FMFM 13 MAGTF Engineer Operations
13. MCRP 3-17A Engineer Field Data
14. MCWP 3-17 Engineer Operations
15. UNIT SOP Unit's Standing Operating Procedures
16. Appropriate Technical Manuals

**SUPPORT REQUIREMENTS:**

**ORDNANCE:**

| DODIC | Quantity |
|---|---|
| M030 Charge, Demolition Block TNT 1/4-Pou | |
| M131 Cap, Blasting Non-Electric M7 | |
| M456 Cord, Detonating PETN Type I Class E | |
| M023 Charge, Demolition Block M112 1-1/4 | |
| M130 Cap, Blasting Electric M6 | |
| ML03 Firing Device, Demolition Multi-Purp | |

**RANGE/TRAINING AREA:** Facility Code 17830 Light Demolition Range

**EQUIPMENT:** PPE

**UNITS/PERSONNEL:** Range Safety officer, Corpsman

**ENGR-RECN-3601:** Assess damage to airfield surfaces

**SUPPORTED MET(S):** 5

**EVALUATION-CODED:** YES **SUSTAINMENT INTERVAL:** 12 months

**DESCRIPTION:** Surface defects can usually be attributed to excessive loads, inferior surfacing material, poor sub-grade or base conditions, inadequate drainage, or a combination of these conditions. Surface inspections should include a complete inventory of the current pavement defects. Careful investigation of the causes of the defects will allow for timely maintenance to prevent the pavement defects from requiring repair.

**CONDITION:** Given a tactical situation, a forward operating base to be repaired, an operations order, commander's intent, personnel, equipment, and references.

**STANDARD:** To restore the forward operating base to optimum operational capability to reestablish surface roughness criteria in order to establish a functional Minimum Operating Strip (MOS) capable of launching and recovering aircraft.

**EVENT COMPONENTS:**
1. Coordinate with supported unit.
2. Coordinate with supporting unit (EOD).
3. Determine personnel, tool, and equipment requirement(s).
4. Proceed to assigned objective.
5. Reconnoiter damaged airfield surface as required.
6. Determine the type and extent of repair required.
7. Once airfield commander has selected an MOS, have EOD clear UXO.
8. Determine material required to complete the repair.
9. Issue the repair order.
10. Inspect completed repair.
11. Submit appropriate engineer reports.

**REFERENCES:**
1. FM 5-430-00-1, Volume 1 Planning and Design of Roads, Airbases, and Heliports in the Theater of Operations
2. FM 5-430-00-2 Planning and design of roads, airfields, and heliports in the theater of operations--Airfield and Heliport design
3. MCRP 3-17B Engineer Forms and Reports
4. MCWP 3.21.1 Aviation Ground Support

**SUPPORT REQUIREMENTS:**

**RANGE/TRAINING AREA:** Facility Code 17918 Road/Airfield Construction Training Site

**EQUIPMENT:** Engineer equipment, PPE

**UNITS/PERSONNEL:** EOD personnel

**ENGR-SURV-3601:** Construct Vehicle Survivability Position/Revetment

**SUPPORTED MET(S):** 3, 4

**EVALUATION-CODED:** YES **SUSTAINMENT INTERVAL:** 6 months

**DESCRIPTION:** Employ organic earth moving assets, to include: Medium Crawler Tractor (MTC), M9 ACE, 1150E, 1155, and 644E and 624 TRAMs.

**CONDITION:** Given an operations order, personnel, engineer equipment, and materials.

**STANDARD:** To build vehicle survivability position(s) (Revetment) that meet or exceed the mission requirement and support the concept of operation in accordance with the commanders' intent.

**EVENT COMPONENTS:**
1. Coordinate with supported unit.
2. Design position required.
3. Determine material required.
4. Calculate time required for construction.
5. Prepare equipment for operation.
6. Move to site.
7. Establish safety zone.
8. Construct Revetment as required.
9. Displace equipment as required.
10. Submit required reports.

**RELATED EVENTS:** 1371-SURV-1002

**REFERENCES:**
1. FM 21-75 Combat Skills of the Soldier
2. FM 3-06 Urban Operations
3. FM 3-07 Stability Operations (2008)
4. FM 5-100 Engineers in Combat Operations
5. FM 5-102 Countermobility
6. FM 5-103 Survivability
7. FM 5-426 Carpentry
8. FMFM 13 MAGTF Engineer Operations
9. FMFRP 12-51 Engineer Operations
10. JP 3-34 Engineer Doctrine for Joint Operations
11. MCRP 3-17A Engineer Field Data
12. MCWP 3-17 Engineer Operations
13. MCWP 3-41.1 Rear Area Operations
14. MCWP 4-11 Combat Service Support

**SUPPORT REQUIREMENTS:**

**RANGE/TRAINING AREA:** Facility Code 17410 Maneuver/Training Area, Light Forces

**EQUIPMENT:** Engineer equipment

**MATERIAL:** MAP, COMPASS, PROTRATOR, OVERLAY SHEETS, RECONNASAICE REPORTS

**MISCELLANEOUS:**

**ADMINISTRATIVE INSTRUCTIONS:** ORM

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**ENGR-XENG-3501:** Conduct Dust Abatement

**SUPPORTED MET(S):** 4

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 3 months

**DESCRIPTION:** Employ a dust palliative with the assistance of organic engineer assets. to include: Medium Crawler Tractor (MTC), M9 ACE, 621B Scraper, Road Grader, Compactor, 1150E, 1155, 420D Backhoe, and 644E and 624 TRAMs.

**CONDITION:** Given an operations order, personnel, engineer equipment, and materials.

**STANDARD:** To mitigate the effects of wind-blown dust on combatants and combat equipment that meets or exceeds commanders' intent and support the concept of operations.

**EVENT COMPONENTS:**
1. Coordinate with supported unit.
2. Design position required.
3. Determine material required.
4. Calculate time required for construction.
5. Prepare equipment for operation.
6. Move to site.
7. Establish safety zone.
8. Construct blast screen as required.
9. Displace equipment as required.
10. Submit required reports.

**REFERENCES:**
1. FM 5-430-00-1, Volume 1 Planning and Design of Roads, Airbases, and Heliports in the Theater of Operations
2. FM 5-430-00-2 Planning and design of roads, airfields, and heliports in the theater of operations--Airfield and Heliport design
3. FM 5-434 Earthmoving Operations
4. MCWP 3-17 Engineer Operations

**SUPPORT REQUIREMENTS:**

**RANGE/TRAINING AREA:**
Facility Code 17410 Maneuver/Training Area, Light Forces
Facility Code 17918 Road/Airfield Construction Training Site

**EQUIPMENT:** Engineer Earthmoving and Material Handling equipment

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**ENGR-CMOB-3501:** Construct field expedient obstacles

**SUPPORTED MET(S):** 3

**EVALUATION-CODED:** YES **SUSTAINMENT INTERVAL:** 3 months

**DESCRIPTION:** The potential of expedient obstacles is almost unlimited. They place a great premium on imagination and ingenuity in the use of available materials and other resources, thus avoiding the logistic burden associated with all other types of obstacles.

**CONDITION:** Given a tactical situation, type of obstacle required, obstacle intent, engineer tools and equipment, Class IV, Class V, expedient obstacle material, personal protective equipment (PPE), and an area to construct the obstacle.

**STANDARD:** To tie into existing natural or other man made obstacles so enemy movement/maneuvers are fixed, turned, blocked or disrupted.

**EVENT COMPONENTS:**
1. Prepare to construct field expedient obstacle(s).
2. Construct log obstacles (if applicable).
3. Construct an abatis (if applicable).
4. Construct improvised obstacles (if applicable)
5. Improve as necessary.

**REFERENCES:**
1. FM 20-32 Mine/Countermine Operations
2. FM 3-06 Urban Operations
3. FM 5-100 Engineers in Combat Operations
4. FM 5-102 Countermobility
5. FM 5-170 Engineer Reconnaissance
6. FM 5-250 Explosives and Demolitions
7. FM 5-34 Engineer Field Data - Field Expedient Charges
8. FM 5-36 Route Reconnaissance and Classification
9. FM 90-1 Countermobility
10. FM 90-3 Desert Operations
11. FM 90-5 Jungle Operations
12. FM 90-7 Combined Arms Obstacle Integration
13. FMFM 13 MAGTF Engineer Operations
14. FMFM 4-4 Engineer Operations
15. MCRP 3-17A Engineer Field Data
16. MCWP 3-17 Engineer Operations
17. TM 11275-15/3D Principal Technical Characteristics of U.S. Marine Corps Engineer Equipment (May 02)
18. UNIT SOP Unit's Standing Operating Procedures
19. Appropriate Technical Manuals

**SUPPORT REQUIREMENTS:**

**RANGE/TRAINING AREA:** Facility Code 17410 Maneuver/Training Area, Light Forces

**EQUIPMENT:** Combat Engineer equipment, tools and kits, Earthmoving equipment

**UTIL-XENG-3501:** Provide Laundry Services

**SUPPORTED MET(S):** 6, 8

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 6 months

**CONDITION:** With a utilities plan, required equipment and personnel.

**STANDARD:** To ensure operational requirements are met.

**EVENT COMPONENTS:**
1. Coordinate with Supported unit(s).
2. Establish laundry facilities.
3. Implement laundry schedule.

**REFERENCES:**
1. MCRP 4-11.1D Field Hygiene and Sanitation

**SUPPORT REQUIREMENTS:**

**RANGE/TRAINING AREA:** Facility Code 17410 Maneuver/Training Area, Light Forces

**EQUIPMENT:** Utilities equipment, PPE

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**UTIL-XENG-3502:** Provide Shower Services

**SUPPORTED MET(S):** 6

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 6 months

**CONDITION:** With a utilities plan, required equipment and personnel

**STANDARD:** To ensure operational requirements are met.

**EVENT COMPONENTS:**
1. Coordinate with Supported unit(s).
2. Establish Shower facilities
3. Implement Shower schedule

**REFERENCES:**
1. MCRP 4-11.1D Field Hygiene and Sanitation

**SUPPORT REQUIREMENTS:**

**RANGE/TRAINING AREA:** Facility Code 17410 Maneuver/Training Area, Light Forces

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**UTIL-MANT-3501:** Maintain Water support equipment

**SUPPORTED MET(S):** 6, 8

**EVALUATION-CODED:** YES **SUSTAINMENT INTERVAL:** 6 months

**CONDITION:** With equipment, tools, repair parts, supplies, personnel and references

**STANDARD:** To sustain equipment in an operational status at or above units' readiness requirements.

**EVENT COMPONENTS:**
1. Conduct operational checks and services.
2. Conduct Limited Technical Inspection (LTI).
3. Open Equipment Repair Order (ERO).
4. Order Repair Parts.
5. Install Repair Parts.
6. Complete Modifications as required.
7. Perform Operational Checks.
8. Complete maintenance administrative requirements.
9. Return equipment to service.

**REFERENCES:**
1. FM 10-52 Water Supply in Theaters of Operation
2. FM 10-52-1 Water Supply Point Equipment and Operations
3. MCWP 4-11.4 Maintenance Operations
4. MCWP 4-11.6 Petroleum and Water Logistics Operations

**SUPPORT REQUIREMENTS:**

**RANGE/TRAINING AREA:**
Facility Code 17410 Maneuver/Training Area, Light Forces
Facility Code 17924 Water Supply Training Area

**EQUIPMENT:** Engineer Material Handling equipment and Utilities equipment

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**UTIL-MANT-3502:** Maintain Hygiene Equipment

**SUPPORTED MET(S):** 6, 8

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**CONDITION:** With equipment, tools, repair parts, supplies, personnel and references

**STANDARD:** To sustain equipment in an operational status at or above units' readiness requirements.

**EVENT COMPONENTS:**
1. Conduct operational checks and services.
2. Conduct Limited Technical Inspection (LTI).
3. Open Equipment Repair Order (ERO).
4. Order Repair Parts.
5. Install Repair Parts.
6. Complete Modifications as required.
7. Perform Operational Checks.
8. Complete maintenance administrative requirements.
9. Return equipment to service.

**REFERENCES:**
1. MCRP 4-11.1D Field Hygiene and Sanitation
2. MCWP 4-11.4 Maintenance Operations

**SUPPORT REQUIREMENTS:**

**RANGE/TRAINING AREA:**
Facility Code 17410 Maneuver/Training Area, Light Forces
Facility Code 17924 Water Supply Training Area

**EQUIPMENT:** Engineer Material Handling equipment and Utilities equipment

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**UTIL-MANT-3503:** Maintain Environmental Control Units

**SUPPORTED MET(S):** 6, 8

**EVALUATION-CODED:** YES **SUSTAINMENT INTERVAL:** 12 months

**CONDITION:** With equipment, tools, repair parts, supplies, personnel and references

**STANDARD:** To sustain equipment in an operational status at or above units' readiness requirements.

**EVENT COMPONENTS:**
1. Conduct operational checks and services.
2. Conduct Limited Technical Inspection (LTI).
3. Open Equipment Repair Order (ERO).
4. Order Repair Parts.
5. Install Repair Parts.
6. Complete Modifications as required.
7. Perform Operational Checks.
8. Complete maintenance administrative requirements.
9. Return equipment to service.

**REFERENCES:**
1. 40 CFR 82 Chapter 40, Code of Federal Regulations, Part Number 82 (Protection of Stratospheric Ozone)
2. 42 USC 85 VI 7671 Title 42, United States Code, Chapter 85, Subchapter VI, Section 7671 (Ozone Protection)
3. MCO 5090.1 Chlorofluorocarbons (CFC's) and Halons (Oct 89)
4. MCWP 4-11.4 Maintenance Operations
5. TM 12359A-OD/B Principal Technical Characteristics of Expeditionary Power Systems Equipment (Aug 2008)

**SUPPORT REQUIREMENTS:**

**RANGE/TRAINING AREA:** Facility Code 17410 Maneuver/Training Area, Light Forces

**EQUIPMENT:** Engineer Material Handling equipment , Utilities equipment, tools and kits

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**UTIL-MANT-3504:** Maintain Refrigeration System(s)

**SUPPORTED MET(S):** 6, 8

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**CONDITION:** With equipment, tools, repair parts, supplies, personnel and references

**STANDARD:** To sustain equipment in an operational status at or above units' readiness requirements.

**EVENT COMPONENTS:**
1. Conduct operational checks and services.
2. Conduct Limited Technical Inspection (LTI).
3. Open Equipment Repair Order (ERO).
4. Order Repair Parts.
5. Install Repair Parts.
6. Complete Modifications as required.
7. Perform Operational Checks.
8. Complete maintenance administrative requirements.
9. Return equipment to service.

**REFERENCES:**
1. 40 CFR 82 Chapter 40, Code of Federal Regulations, Part Number 82 (Protection of Stratospheric Ozone)
2. 42 USC 85 VI 7671 Title 42, United States Code, Chapter 85, Subchapter VI, Section 7671 (Ozone Protection)
3. MCO 5090.1 Chlorofluorocarbons (CFC's) and Halons (Oct 89)
4. MCWP 4-11.4 Maintenance Operations
5. TM 12359A-OD/B Principal Technical Characteristics of Expeditionary Power Systems Equipment (Aug 2008)

**SUPPORT REQUIREMENTS:**

**RANGE/TRAINING AREA:** Facility Code 17410 Maneuver/Training Area, Light Forces

**EQUIPMENT:** Engineer Material Handling equipment , Utilities equipment, tools and kits

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**ENGR-RECN-3501:** Survey Site for Construction

**SUPPORTED MET(S):** 5

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**CONDITION:** Provided a construction mission, a map, a scientific calculator, task organized personnel, equipment, and references.

**STANDARD:** To support commanders' intent and mission requirements.

**EVENT COMPONENTS:**
1. Coordinate with supported unit.

2. Move to survey site.
3. Reconnoiter project site as required.
4. Submit required reports.

**REFERENCES:**
1. FM 5-426 Carpentry
2. FM 5-428 Concrete Masonry
3. MCRP 3-17A Engineer Field Data
4. MCWP 3-17.4 Engineer Reconnaissance
5. NAVEDTRA 10696 Engineer Aid 3
6. TM 5-581B Construction Drafting
7. TM 5-704 Construction Print Reading in the Field

**SUPPORT REQUIREMENTS:**

**RANGE/TRAINING AREA:** Facility Code 17410 Maneuver/Training Area, Light Forces

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**ENGR-RECN-3502:** Assess damage to airfield surfaces

**SUPPORTED MET(S):** 5

**EVALUATION-CODED:** YES **SUSTAINMENT INTERVAL:** 12 months

**DESCRIPTION:** Surface defects can usually be attributed to excessive loads, inferior surfacing material, poor sub-grade or base conditions, inadequate drainage, or a combination of these conditions. Surface inspections should include a complete inventory of the current pavement defects. Careful investigation of the causes of the defects will allow for timely maintenance to prevent the pavement defects from requiring repair.

**CONDITION:** Given an operations order, an airfield facilities and structures to be repaired, personnel, resources, equipment, and references.

**STANDARD:** To restore airfield facilities and structures to operating conditions per commanders' intent and support mission requirements.

**EVENT COMPONENTS:**
1. Coordinate with supported unit.
2. Determine personnel, tool, and equipment requirement(s).
3. Proceed to assigned objective.
4. Reconnoiter damaged airfield surface as required.
5. Determine the type and extent of repair required.
6. Determine material required to complete the repair.
7. Issue the repair order.
8. Inspect completed repair.
9. Submit appropriate engineer reports.

**REFERENCES:**
1. FM 5-430-00-1, Volume 1 Planning and Design of Roads, Airbases, and Heliports in the Theater of Operations
2. FM 5-430-00-2 Planning and design of roads, airfields, and heliports in the theater of operations--Airfield and Heliport design

3. MCRP 3-17B Engineer Forms and Reports
4. MCWP 3.21.1 Aviation Ground Support

**SUPPORT REQUIREMENTS:**

**RANGE/TRAINING AREA:** Facility Code 17918 Road/Airfield Construction Training Site

**EQUIPMENT:** Engineer equipment, PPE

**UNITS/PERSONNEL:** EOD personnel

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**ENGR-SURV-3401:** Construct Individual Fighting Position

**SUPPORTED MET(S):** 9

**EVALUATION-CODED:** YES **SUSTAINMENT INTERVAL:** 6 months

**DESCRIPTION:** Employ organic hand tools and/or earth moving assets, to include: 420D IT Backhoe, tools and equipment.

**CONDITION:** Given an operations order, personnel, and engineer equipment.

**STANDARD:** That allows a single combatant the ability to engage targets from front and obliques, and meets or exceeds the mission requirement and support the concept of operation in accordance with the commanders' intent.

**EVENT COMPONENTS:**
1. Coordinate with supported unit.
2. Prepare equipment for operation.
3. Move to site.
4. Establish safety zone.
5. Dig emplacement as required.
6. Displace equipment as required.
7. Submit required reports.

**RELATED EVENTS:** 1371-SURV-1002

**REFERENCES:**
1. FM 21-75 Combat Skills of the Soldier
2. FM 3-06 Urban Operations
3. FM 3-07 Stability Operations (2008)
4. FM 5-100 Engineers in Combat Operations
5. FM 5-102 Countermobility
6. FM 5-103 Survivability
7. FM 5-426 Carpentry
8. FMFM 13 MAGTF Engineer Operations
9. FMFRP 12-51 Engineer Operations
10. JP 3-34 Engineer Doctrine for Joint Operations
11. MCRP 3-17A Engineer Field Data
12. MCWP 3-17 Engineer Operations
13. MCWP 3-41.1 Rear Area Operations
14. MCWP 4-11 Combat Service Support

**SUPPORT REQUIREMENTS:**

**RANGE/TRAINING AREA:** Facility Code 17410 Maneuver/Training Area, Light Forces

**EQUIPMENT:** Engineer equipment, Combat engineer tools & kits

**MATERIAL:** MAP, COMPASS, PROTRATOR, OVERLAY SHEETS, RECONNASAICE REPORTS

**MISCELLANEOUS:**

**ADMINISTRATIVE INSTRUCTIONS:** ORM

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**ENGR-SURV-3402:** Construct Crew Served Weapons Position

**SUPPORTED MET(S):** 3, 9

**EVALUATION-CODED:** YES **SUSTAINMENT INTERVAL:** 6 months

**DESCRIPTION:** Employ organic hand tools and/or earth moving assets, to include: 420D IT Backhoe, tools and equipment.

**CONDITION:** Given an operations order, personnel, and engineer equipment.

**STANDARD:** That allows a weapons team the capability to engage targets from front and obliques, and meets or exceeds the mission requirement and support the concept of operation in accordance with the commanders' intent.

**EVENT COMPONENTS:**
1. Coordinate with supported unit.
2. Prepare equipment for operation.
3. Move to site.
4. Establish safety zone.
5. Dig emplacement as required.
6. Displace equipment as required.
7. Submit required reports.

**RELATED EVENTS:** 1371-SURV-1002

**REFERENCES:**
1. FM 21-75 Combat Skills of the Soldier
2. FM 3-06 Urban Operations
3. FM 3-07 Stability Operations (2008)
4. FM 5-100 Engineers in Combat Operations
5. FM 5-102 Countermobility
6. FM 5-103 Survivability
7. FM 5-426 Carpentry
8. FMFM 13 MAGTF Engineer Operations
9. FMFRP 12-51 Engineer Operations
10. JP 3-34 Engineer Doctrine for Joint Operations
11. MCRP 3-17A Engineer Field Data
12. MCWP 3-17 Engineer Operations
13. MCWP 3-41.1 Rear Area Operations
14. MCWP 4-11 Combat Service Support

**SUPPORT REQUIREMENTS:**

**RANGE/TRAINING AREA:** Facility Code 17410 Maneuver/Training Area, Light Forces

**EQUIPMENT:** Engineer equipment, Combat engineer tools & kits

**MATERIAL:** MAP, COMPASS, PROTRATOR, OVERLAY SHEETS, RECONNASAICE REPORTS

**MISCELLANEOUS:**

**ADMINISTRATIVE INSTRUCTIONS:** ORM

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**ENGR-SURV-3403:** Construct Overhead Cover

**SUPPORTED MET(S):** 3, 9

**EVALUATION-CODED:** YES **SUSTAINMENT INTERVAL:** 6 months

**DESCRIPTION:** Employ organic engineer tools and/or earth moving assets, to include: 420D IT Backhoe in the construction of fighting positions with overhead protection.

**CONDITION:** Given an operations order, personnel, and engineer equipment.

**STANDARD:** That allows a weapons team the capability to engage targets from front and obliques, and meets or exceeds the mission requirement and support the concept of operation in accordance with the commanders' intent.

**EVENT COMPONENTS:**
1. Coordinate with supported unit.
2. Design position required.
3. Determine material required.
4. Calculate time required for construction.
5. Prepare equipment for operation.
6. Move to site.
7. Establish safety zone.
8. Construct overhead cover as required.
9. Displace equipment as required.
10. Submit required reports.

**RELATED EVENTS:** 1371-SURV-1002

**REFERENCES:**
1. FM 21-75 Combat Skills of the Soldier
2. FM 3-06 Urban Operations
3. FM 3-07 Stability Operations (2008)
4. FM 5-100 Engineers in Combat Operations
5. FM 5-102 Countermobility
6. FM 5-103 Survivability
7. FM 5-426 Carpentry
8. FMFM 13 MAGTF Engineer Operations
9. FMFRP 12-51 Engineer Operations
10. JP 3-34 Engineer Doctrine for Joint Operations

11. MCRP 3-17A Engineer Field Data
12. MCWP 3-17 Engineer Operations
13. MCWP 3-41.1 Rear Area Operations
14. MCWP 4-11 Combat Service Support

**SUPPORT REQUIREMENTS:**

**RANGE/TRAINING AREA:** Facility Code 17410 Maneuver/Training Area, Light Forces

**EQUIPMENT:** Engineer equipment, Combat engineer tools & kits

**MATERIAL:** MAP, COMPASS, PROTRATOR, OVERLAY SHEETS, RECONNASAICE REPORTS

**MISCELLANEOUS:**

**ADMINISTRATIVE INSTRUCTIONS:** ORM

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**ENGR-SURV-3404:** Construct Triggering Screen

**SUPPORTED MET(S):** 9

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**DESCRIPTION:** Employ organic engineer tools and/or earth moving assets, to include: 420D IT Backhoe in the construction of obstacles that affords rocket propelled grenade blast protection.

**CONDITION:** Given an operations order, personnel, and engineer equipment.

**STANDARD:** That provides combatant(s) and/or combat equipment cover from direct-fired rocket assisted grenade weapons, while permitting combatants the capability to engage targets from front and obliques, and meets or exceeds the mission requirement and support the concept of operation in accordance with the commanders' intent.

**EVENT COMPONENTS:**
1. Coordinate with supported unit.
2. Design position required.
3. Determine material required.
4. Calculate time required for construction.
5. Prepare equipment for operation.
6. Move to site.
7. Establish safety zone.
8. Construct blast screen as required.
9. Displace equipment as required.
10. Submit required reports.

**RELATED EVENTS:** 1371-SURV-1002

**REFERENCES:**
1. FM 21-75 Combat Skills of the Soldier
2. FM 3-06 Urban Operations
3. FM 3-07 Stability Operations (2008)

4. FM 5-100 Engineers in Combat Operations
5. FM 5-102 Countermobility
6. FM 5-103 Survivability
7. FM 5-426 Carpentry
8. FMFM 13 MAGTF Engineer Operations
9. FMFRP 12-51 Engineer Operations
10. JP 3-34 Engineer Doctrine for Joint Operations
11. MCRP 3-17A Engineer Field Data
12. MCWP 3-17 Engineer Operations
13. MCWP 3-41.1 Rear Area Operations
14. MCWP 4-11 Combat Service Support

**SUPPORT REQUIREMENTS:**

**RANGE/TRAINING AREA:** Facility Code 17410 Maneuver/Training Area, Light Forces

**EQUIPMENT:** Engineer equipment, Combat engineer tools & kits

**MATERIAL:** MAP, COMPASS, PROTRATOR, OVERLAY SHEETS, RECONNASAICE REPORTS

**MISCELLANEOUS:**

**ADMINISTRATIVE INSTRUCTIONS:** ORM

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**ENGR-RECN-3401:** Conduct Cache sweep

**SUPPORTED MET(S):** 5

**EVALUATION-CODED:** YES **SUSTAINMENT INTERVAL:** 3 months

**DESCRIPTION:** Employ engineer assets to detect for suspected caches of ordnance, to include: munitions, mines, ammunition, weapons, and explosives.

**CONDITION:** Provided a mission order, a mine detector, personnel, equipment, personal protective equipment, and references.

**STANDARD:** To locate, mark, and neutralize all undiscovered ordnance, munitions, mines, ammunition, weapons, and explosives per commanders intent and mission requirement.

**EVENT COMPONENTS:**
1. Coordinate with supported unit.
2. Determine detector to be used.
3. Calculate time required for construction.
4. Prepare equipment for operation.
5. Move to site.
6. Establish safety zone.
7. Conduct area sweep.
8. Locate and mark the object.
9. Identify the object.
10. Neutralize mine(s).
11. Proof area to ensure explosive object has been properly neutralized.
12. Submit required reports.

**REFERENCES:**
1. FM 3-34.119 Improvised Explosive Device (IED) Defeat
2. FM 3-34.210 Explosive Hazard Operations
3. FM 3-34.214 Explosives and Demolitions
4. MCRP 3-17.2 Multiservice Procedures for Explosive Ordnance Disposal (NTTP) in a Joint Environment
5. MCRP 3-17B Engineer Forms and Reports
6. MCWP 3-17 Engineer Operations

**SUPPORT REQUIREMENTS:**

**ORDNANCE:**

| DODIC | Quantity |
|---|---|
| M023 Charge, Demolition Block M112 1-1/4 | |
| M131 Cap, Blasting Non-Electric M7 | |
| M130 Cap, Blasting Electric M6 | |
| M456 Cord, Detonating PETN Type I Class E | |
| MN08 Igniter, Time Blasting Fuse with Sho | |
| M670 Fuse, Blasting Time M700 | |

**RANGE/TRAINING AREA:**
Facility Code 17410 Maneuver/Training Area, Light Forces
Facility Code 17830 Light Demolition Range

**EQUIPMENT:** Combat engineer equipment, tools and kits

**UNITS/PERSONNEL:** Range safety officer, Corpsman, EOD personnel, Weapons intelligence team

**OTHER SUPPORT REQUIREMENTS:** ORM

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**ENGR-RECN-3402:** Conduct Obstacle Reconnaissance

**SUPPORTED MET(S):** 5

**EVALUATION-CODED:** YES **SUSTAINMENT INTERVAL:** 6 months

**CONDITION:** Provided a mission, a tactical scenario, blank engineer reconnaissance forms (DA Form 1711-R), personnel, equipment, and references

**STANDARD:** To identify obstacles; identify suitable bypasses; and record any other relevant engineer information on the appropriate reconnaissance forms per the references. All information will be transferred to a map overlay using correct engineer/tactical symbols

**EVENT COMPONENTS:**
1. Coordinate with supported unit.
2. Review the map of the route to be taken.
3. Proceed to assigned objective.
4. Reconnoiter obstacle as required.
5. Locate and mark the object.
6. Identify the object.
7. Identify suitable bypasses.
8. Submit required reports.

**REFERENCES:**
1. FM 5-102 Countermobility
2. GTA 5-2-5 Engineer Reconnaissance
3. JP 3-34 Engineer Doctrine for Joint Operations
4. MCRP 3-17A Engineer Field Data
5. MCRP 3-17B Engineer Forms and Reports
6. MCWP 2-15.3 Ground Reconnaissance Operations (FMFM 2-2)
7. MCWP 3-1 Ground Combat Operations
8. MCWP 3-17 Engineer Operations
9. MCWP 3-17.3 MAGTF Breaching Operations
10. MCWP 3-17.4 Engineer Reconnaissance

**SUPPORT REQUIREMENTS:**

**RANGE/TRAINING AREA:**
Facility Code 17410 Maneuver/Training Area, Light Forces
Facility Code 17920 Panel Bridge Area

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**ENGR-RECN-3403:** Conduct Bridge Reconnaissance

**SUPPORTED MET(S):** 5

**EVALUATION-CODED:** YES **SUSTAINMENT INTERVAL:** 6 months

**DESCRIPTION:** To identify wet or dry areas to be used to cross. Evaluate gaps, fords, and ferry sites. Identify obstacles, suitable bypasses, and record any other relevant engineer information on the appropriate reconnaissance forms per the references. All information will be transferred to a map overlay using correct engineer/tactical symbols.

**CONDITION:** Provided a mission, a tactical scenario, blank engineer reconnaissance forms (DA Form 1711-R), personnel, equipment, and references

**STANDARD:** To classify bridges, identify obstacles, identify suitable bypasses, and record any other relevant engineer information on the appropriate reconnaissance forms per the references. All information will be transferred to a map overlay using correct engineer/tactical symbols

**EVENT COMPONENTS:**
1. Coordinate with supported unit.
2. Review the map of the route to be taken.
3. Proceed to assigned objective.
4. Reconnoiter bridge.
5. Classify bridge(s) as required.
6. Identify suitable bypasses.
7. Submit required reports.

**REFERENCES:**
1. 5-446 Military Non-Standard Fixed Bridge
2. FM 5-102 Countermobility
3. FM 5-170 Engineer Reconnaissance
4. GTA 5-2-5 Engineer Reconnaissance
5. GTA 5-7-13 Bridge Classification Booklet
6. JP 3-34 Engineer Doctrine for Joint Operations

7. MCRP 3-17A Engineer Field Data
8. MCRP 3-17B Engineer Forms and Reports
9. MCWP 2-15.3 Ground Reconnaissance Operations (FMFM 2-2)
10. MCWP 3-1 Ground Combat Operations
11. MCWP 3-17 Engineer Operations
12. MCWP 3-17.3 MAGTF Breaching Operations
13. MCWP 3-17.4 Engineer Reconnaissance

**SUPPORT REQUIREMENTS:**

**RANGE/TRAINING AREA:**
Facility Code 17920 Panel Bridge Area
Facility Code 17410 Maneuver/Training Area, Light Forces

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**ENGR-RECN-3404:** Conduct Road Reconnaissance

**SUPPORTED MET(S):** 5

**EVALUATION-CODED:** YES **SUSTAINMENT INTERVAL:** 12 months

**DESCRIPTION:** Provided a mission, a tactical scenario, blank engineer reconnaissance forms (DA Form 1711-R), personnel, equipment, and references

**CONDITION:** Provided a mission, a tactical scenario, blank engineer reconnaissance forms (DA Form 1711-R), personnel, equipment, and references

**STANDARD:** To classify roads, routes; identify obstacles; identify suitable bypasses; and record any other relevant engineer information on the appropriate reconnaissance forms per the references. All information will be transferred to a map overlay using correct engineer/tactical symbols.

**EVENT COMPONENTS:**
1. Coordinate with supported unit.
2. Review the map of the route to be taken.
3. Proceed to assigned objective.
4. Reconnoiter road(s) or route(s) as required.
5. Classify road(s) as required.
6. Classify route(s) as required
7. Identify suitable bypasses.
8. Submit required reports.

**REFERENCES:**
1. FM 5-101 Mobility
2. FM 5-102 Countermobility
3. FM 5-34 Engineer Field Data - Field Expedient Charges
4. GTA 5-2-5 Engineer Reconnaissance
5. JP 3-34 Engineer Doctrine for Joint Operations
6. MCRP 3-17A Engineer Field Data
7. MCRP 3-17B Engineer Forms and Reports
8. MCWP 2-15.3 Ground Reconnaissance Operations (FMFM 2-2)
9. MCWP 3-17 Engineer Operations
10. MCWP 3-17.4 Engineer Reconnaissance

**SUPPORT REQUIREMENTS:**

**RANGE/TRAINING AREA:** Facility Code 17410 Maneuver/Training Area, Light Forces

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**ENGR-CMOB-3401:** Emplace explosive obstacles

**SUPPORTED MET(S):** 3

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 6 months

**DESCRIPTION:** Employ improvised anti-personnel and anti-tank mines as explosive obstacles.

**CONDITION:** Given an operations order, personnel, demolitions material, engineer equipment, and while wearing fighting load.

**STANDARD:** To support the defensive concept of operations.

**EVENT COMPONENTS:**
1. Coordinate with supported unit.
2. Locate obstacle site.
3. Prepare site.
4. Emplace minefield controls.
5. Place row markers.
6. Record mine placement.
7. Arm mines.
8. Submit required reports.
9. Recover mines as required.

**REFERENCES:**
1. FM 20-32 Mine/Countermine Operations
2. FM 3-06 Urban Operations
3. FM 3-34.210 Explosive Hazard Operations
4. FM 3-34.214 Explosives and Demolitions
5. FM 5-100 Engineers in Combat Operations
6. FM 5-102 Countermobility
7. FM 5-250 Explosives and Demolitions
8. FM 5-36 Route Reconnaissance and Classification
9. FM 90-1 Countermobility
10. FM 90-7 Combined Arms Obstacle Integration
11. FMFM 13 MAGTF Engineer Operations
12. MCRP 3-17A Engineer Field Data
13. MCWP 2-15.3 Ground Reconnaissance Operations (FMFM 2-2)
14. MCWP 3-17 Engineer Operations
15. MCWP 3-17.4 Engineer Reconnaissance
16. UNIT SOP Unit's Standing Operating Procedures
17. Appropriate Technical Manuals

**SUPPORT REQUIREMENTS:**

**ORDNANCE:**

| DODIC | Quantity |
|---|---|
| M030 Charge, Demolition Block TNT 1/4-Pou | |

M131 Cap, Blasting Non-Electric M7
M456 Cord, Detonating PETN Type I Class E
M023 Charge, Demolition Block M112 1-1/4
M130 Cap, Blasting Electric M6
ML03 Firing Device, Demolition Multi-Purp

**RANGE/TRAINING AREA:**
Facility Code 17830 Light Demolition Range
Facility Code 17905 Mine Warfare Area

**EQUIPMENT:** PPE, Combat engineer equipment, tools and kits

**UNITS/PERSONNEL:** Range Safety officer, Corpsman

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**ENGR-CMOB-3402:** Build constructed obstacles

**SUPPORTED MET(S):** 3

**EVALUATION-CODED:** YES **SUSTAINMENT INTERVAL:** 3 months

**DESCRIPTION:** Constructed obstacles are those reinforcing obstacles that are built by marines and machinery, generally without the use of explosives. Typical examples are: Wire, Tank ditches, Log cribs, Steel H beam post obstacles, Falling or tumble blocks, Dragons teeth, hedgehogs, and tetrahedrons and non-explosive abatis.

**CONDITION:** Given a mission, commanders intent, location to emplace the obstacle, task organized personnel and equipment, and resources (Class IV, V, natural terrain, battlefield materials, etc.).

**STANDARD:** that will turn, block, fix, or disrupt the enemy and supports commanders' intent.

**EVENT COMPONENTS:**
1. Review mission and schematics
2. Determine actual work sequence.
3. Coordinate logistical requirements.
4. Coordinate overwatch/ security for obstacle construction.
5. Move to obstacle site.
6. Tie obstacles into natural/existing obstacles as required.
7. Construct/place mobility obstacles (barriers, hedgehogs, ect.) as required.
8. Construct wire obstacles as required.
9. Construct/place field expedient obstacles (logs, abatis, rubble, ect.) as required.
10. Construct/create phony obstacles as required.
11. Construct tank ditches as required.
12. Submit required reports.

**REFERENCES:**
1. FM 20-32 Mine/Countermine Operations
2. FM 3-06 Urban Operations
3. FM 5-102 Countermobility
4. FM 5-250 Explosives and Demolitions

5. FM 5-36 Route Reconnaissance and Classification
6. FM 90-1 Countermobility
7. FM 90-7 Combined Arms Obstacle Integration
8. MCRP 3-17A Engineer Field Data
9. MCRP 3-17B Engineer Forms and Reports
10. MCWP 2-15.3 Ground Reconnaissance Operations (FMFM 2-2)
11. MCWP 3-1 Ground Combat Operations
12. MCWP 3-17 Engineer Operations
13. MCWP 3-17.1a Combined Arms, Gap Crossing Operations
14. MCWP 3-17.4 Engineer Reconnaissance
15. UNIT SOP Unit's Standing Operating Procedures
16. Appropriate Technical Manuals

**SUPPORT REQUIREMENTS:**

**RANGE/TRAINING AREA:** Facility Code 17410 Maneuver/Training Area, Light Forces

**EQUIPMENT:** Combat engineer equipment, tools and kits, Material Handling equipment, Earthmoving equipment

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**ENGR-XENG-3401:** Provide Crane Support

**SUPPORTED MET(S):** 4

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 6 months

**DESCRIPTION:** Employ organic crane assets, to include: ATC 50 ton and LRT 110 7 ton cranes.

**CONDITION:** Given an operations order, personnel, and engineer equipment.

**STANDARD:** To support mission requirements.

**EVENT COMPONENTS:**
1. Coordinate with supported unit.
2. Prepare equipment for operation.
3. Move to site.
4. Establish safety zone.
5. Deploy safety measures for equipment.
6. Conduct lift of material.
7. Displace equipment as required.
8. Submit required reports.

**REFERENCES:**
1. Applicable Technical Publications/Manuals
2. Local Standard Operating Procedures (SOP)

**SUPPORT REQUIREMENTS:**

**RANGE/TRAINING AREA:**
Facility Code 17410 Maneuver/Training Area, Light Forces
Facility Code 17420 Maneuver/Training Area, Heavy Forces

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**ENGR-XENG-3402:** Provide Material Handling Equipment (MHE) Support

**SUPPORTED MET(S):** 4

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 6 months

**DESCRIPTION:** Employ organic material handling equipment assets, to include: KALMAR RTCH, 644E and 624 TRAMs, Extended Boom Fork Lift, and MMV forklifts.

**CONDITION:** Given an operations order, personnel, and engineer equipment.

**STANDARD:** To support mission requirements.

**EVENT COMPONENTS:**
1. Coordinate with supported unit.
2. Prepare equipment for operation.
3. Move to site.
4. Establish safety zone.
5. Deploy safety measures for equipment.
6. Conduct lift of material.
7. Displace equipment as required.
8. Submit required reports.

**REFERENCES:**
1. Applicable Technical Publications/Manuals
2. Local Standard Operating Procedures (SOP)

**SUPPORT REQUIREMENTS:**

**RANGE/TRAINING AREA:**
Facility Code 17420 Maneuver/Training Area, Heavy Forces
Facility Code 17410 Maneuver/Training Area, Light Forces

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**ENGR-XENG-3403:** Provide Earth Moving Equipment Support

**SUPPORTED MET(S):** 4

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 6 months
**DESCRIPTION:** Employ organic earth moving assets, to include: Medium Crawler Tractor (MTC), M9 ACE, 621B Scraper, Road Grader, Compactor, 1150E, 1155, 420D Backhoe, and 644E and 624 TRAMs.

**CONDITION:** Given an operations order, personnel, and engineer equipment.

**STANDARD:** To support mission requirements.

**EVENT COMPONENTS:**
1. Coordinate with supported unit.
2. Prepare equipment for operation.
3. Move to site.
4. Establish safety zone.
5. Deploy safety measures for equipment.
6. Conduct lift of material.

7. Displace equipment as required.
8. Submit required reports.

**REFERENCES:**
1. Applicable Technical Publications/Manuals
2. Local Standard Operating Procedures (SOP)

**SUPPORT REQUIREMENTS:**

**RANGE/TRAINING AREA:**
Facility Code 17410 Maneuver/Training Area, Light Forces
Facility Code 17420 Maneuver/Training Area, Heavy Forces

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**ENGR-XENG-3404:** Fell Standing Timber

**SUPPORTED MET(S):** 4

**EVALUATION-CODED:** YES **SUSTAINMENT INTERVAL:** 3 month

**CONDITION:** Given a operations order, standing timber, appropriate hand tools, an SL-3 complete chainsaw, mixed fuel, personnel, and all personal protective equipment (PPE).

**STANDARD:** To clear a forested area in support of operations and satisfy the commanders' intent.

**EVENT COMPONENTS:**
1. Coordinate with supported unit.
2. Determine equipment required.
3. Calculate time required for construction.
4. Prepare equipment for operation.
5. Move to site.
6. Establish safety zone.
7. Cut timber.
8. Submit required reports.

**REFERENCES:**
1. MCRP 3-17A Engineer Field Data
2. MCRP 3-17B Engineer Forms and Reports
3. Appropriate TM/Manufacture's Manual for Chainsaw

**SUPPORT REQUIREMENTS:**

**RANGE/TRAINING AREA:** Facility Code 17410 Maneuver/Training Area, Light Forces

**EQUIPMENT:** Combat engineer tools and kits, PPE

**OTHER SUPPORT REQUIREMENTS:** ORM

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**UTIL-XENG-3401:** Provide Floodlight Support

**SUPPORTED MET(S):** 8

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 6 months

**CONDITION:** With an operational order, required equipment and personnel

**STANDARD:** To properly illuminate required area.

**EVENT COMPONENTS:**
1. Coordinate with Supported unit(s).
2. Establish illumination plan.
3. Set up floodlight set(s).
4. Operate a floodlight.

**REFERENCES:**
1. FM 5-424 Theater of Operations Electrical Systems (Jun 97)
2. TM 12359A-OD/B Principal Technical Characteristics of Expeditionary Power Systems Equipment (Aug 2008)

**SUPPORT REQUIREMENTS:**

**RANGE/TRAINING AREA:** Facility Code 17410 Maneuver/Training Area, Light Forces

**EQUIPMENT:** Utilities equipment, PPE

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**UTIL-XENG-3402:** Establish Mobile Electric Power Sites

**SUPPORTED MET(S):** 8

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 6 months

**CONDITION:** With a Utilities Plan, required equipment and personnel

**STANDARD:** To ensure operational requirements are met.

**EVENT COMPONENTS:**
1. Coordinate with Supported unit(s).
2. Set up Generator Site(s).
3. Inspect Grounding and Connections.
4. Energize System(s).
5. Perform Operational Check(s).
6. Test System.

**REFERENCES:**
1. FM 5-424 Theater of Operations Electrical Systems (Jun 97)
2. TM 12359A-OD/B Principal Technical Characteristics of Expeditionary Power Systems Equipment (Aug 2008)
3. TM 9406-15 Grounding Procedures for Electromagnetic Interference Control and Safety (Aug 91)
4. Appropriate Technical Manuals

**SUPPORT REQUIREMENTS:**

**RANGE/TRAINING AREA:** Facility Code 17410 Maneuver/Training Area, Light Forces

**EQUIPMENT:** Utilities equipment, PPE

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**UTIL-XENG-3403:** Wire a Structure for Electricity

**SUPPORTED MET(S):** 4, 8

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**CONDITION:** Provided a mission, resources, required equipment, and personnel.

**STANDARD:** To establish operational power per commanders' intent to support mission requirements.

**EVENT COMPONENTS:**
1. Coordinate with Supported unit(s).
2. Coordinate with supporting units.
3. Estimate materials required.
4. Calculate time required to wire structure.
5. Gather tools and materials.
6. Move to site.
7. Install electrical wire in structure.
8. Set safety zone.
9. Inspect wire installation.
10. Submit required reports.

**REFERENCES:**
1. 29 CFR 1910.147 Chapter 29, Code of Federal Regulations, Part Number 1910 (Occupational Safety and Health Standards), Standard Number 147 - Control of Hazardous Energy (Lockout/Tagout)
2. 29 CFR 1910.269 Chapter 29, Code of Federal Regulations, Part Number 1910 (Occupational Safety and Health Standards), Standard Number 269 - Electrical Power Generation, Transmission, and Distribution
3. 29 CFR 1910.301-399 Chapter 29, Code of Federal Regulations, Part Number 1910 (Occupational Safety and Health Standards), Subpart S, (Standard Numbers 301-399) - Electrical
4. FM 5-424 Theater of Operations Electrical Systems (Jun 97)
5. NEC (NFPA 70) National Electrical Code - by National Fire Protection Association

**SUPPORT REQUIREMENTS:**

**RANGE/TRAINING AREA:** Facility Code 17410 Maneuver/Training Area, Light Forces

**EQUIPMENT:** Utilities equipment, PPE

**MISCELLANEOUS:**

**ADMINISTRATIVE INSTRUCTIONS:** Final inspection must be performed by a qualified inspector who is a graduate of one or more listed courses: Advanced Electrician (AE), Utilities Chief (UC), or Utilities Officer (UO) Course.

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**UTIL-XENG-3404:** Install Plumbing in a Structure

**SUPPORTED MET(S):** 6

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**CONDITION:** Provided a mission, resources, required equipment, and personnel.

**STANDARD:** To establish water a sewer services per commanders intent to support mission requirements.

**EVENT COMPONENTS:**
1. Coordinate with Supported unit(s).
2. Coordinate with supporting units.
3. Estimate materials required.
4. Calculate time required to plumb structure.
5. Gather tools and materials.
6. Move to site.
7. Set safety zone.
8. Install plumbing in structure.
9. Inspect piping installation.
10. Submit required reports.

**REFERENCES:**
1. UPC (IAPMO/ANSI) Uniform Plumbing Code - by International Association of Plumbing and Mechanical Officials/American National Standard Institute

**SUPPORT REQUIREMENTS:**

**RANGE/TRAINING AREA:** Facility Code 17410 Maneuver/Training Area, Light Forces

**EQUIPMENT:** Utilities equipment, PPE

**MISCELLANEOUS:**

**ADMINISTRATIVE INSTRUCTIONS:** Final inspection must be performed by a qualified inspector who is a graduate of one or more listed courses: Advanced Water Support Technician (AWST), Utilities Chief (UC), or Utilities Officer (UO) Course.

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**UTIL-MANT-3501:** Maintain Tactical Water Purification Systems

**SUPPORTED MET(S):** 6

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**CONDITION:** With equipment, tools, repair parts, supplies, personnel and references

**STANDARD:** To sustain equipment in an operational status at or above units' readiness requirements.

**EVENT COMPONENTS:**

1. Conduct operational checks and services.
2. Conduct Limited Technical Inspection (LTI).
3. Open Equipment Repair Order (ERO).
4. Order Repair Parts.
5. Install Repair Parts.
6. Complete Modifications as required.
7. Perform Operational Checks.
8. Complete maintenance administrative requirements.
9. Return equipment to service.

**REFERENCES:**

1. FM 10-52 Water Supply in Theaters of Operation
2. FM 10-52-1 Water Supply Point Equipment and Operations
3. MCWP 4-11.4 Maintenance Operations
4. MCWP 4-11.6 Petroleum and Water Logistics Operations

**SUPPORT REQUIREMENTS:**

**RANGE/TRAINING AREA:**
Facility Code 17410 Maneuver/Training Area, Light Forces
Facility Code 17924 Water Supply Training Area

**EQUIPMENT:** Engineer Material Handling equipment and Utilities equipment

ENG & UTIL T&R MANUAL

CHAPTER 4

MOS 1120 INDIVIDUAL EVENTS

# CHAPTER 4

# MOS 1120 INDIVIDUAL EVENTS

**4000. PURPOSE.** This chapter details the individual events that pertain to the Utilities Officer. These events are linked to a service-level Mission Essential Task (MET). This linkage tailor's individual training for the selected MET. Each individual event provides an event title, along with the conditions events will be performed under, and the standard to which the event must be performed to be successful.

## 4001. ADMINISTRATIVE NOTES

1. Individual T&R events are coded for ease of reference. Each event has a 4-4-4 digit identifier. The first four digits represent the occupational field or military occupational field (Utilities Officer, or 1120).

2. The second four digits represent the functional or duty area. For example:

ADMN - Administration
XENG - General Engineering

See Appendix A for a complete list of functional areas.

3. The first of the last four characters represent the level (1000 or 2000) and the last three characters the sequence (1001, 2001) of the event. The Utilities Officer individual training events are separated into two levels:

2000 - Core Plus Skills

## 4002. INDEX OF INDIVIDUAL EVENTS

## 4003. 2000-LEVEL EVENTS

**1120-ADMN-2001:** Manage Operational Risk (ORM)

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 6 months

**BILLETS:** Utilities Officer

**GRADES:** WO-1, CWO-2, CWO-3, CWO-4, CWO-5

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Given a task/mission, a Risk Management Worksheet, and references.

**STANDARD:** To ensure safety mishaps are mitigated through the use of risk management controls per the references.

**PERFORMANCE STEPS:**
1. Review task/mission.
2. Review references.
3. Identify hazards, recording them on Risk Management Worksheet.
4. Assess severity and probability of hazards to determine risk levels.
5. Develop risk control measures.
6. Make risk decisions.
7. Supervise implementation of controls.
8. Periodically review task/mission, hazards and controls.

**PREREQUISITE EVENTS:** 1169-ADMN-2001

**RELATED EVENTS:**
1141-ADMN-1001 1171-ADMN-1001 1161-ADMN-1001
1142-ADMN-1001

**REFERENCES:**
1. DODI 6055.1 DoD Safety and Occupational Health (SOH) Program (Aug 98)
2. MCO 3500.27B Operational Risk Management (ORM) (MAY 2004)
3. MCRP 5-12.1C Risk Management (Feb 01)

**SUPPORT REQUIREMENTS:**

**MATERIAL:** Risk Management Worksheet.

**MISCELLANEOUS:**

**ADMINISTRATIVE INSTRUCTIONS:** Initial training for this event is received in the Utilities Chief course (CID: M0311E2). Risk assessment is taught at all basic MOS producing courses in the Occupational Field.

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**1120-ADMN-2002:** Administer a Lockout/Tagout Program

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 6 months

**BILLETS:** Utilities Officer

**GRADES:** WO-1, CWO-2, CWO-3, CWO-4, CWO-5

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Given a safety requirement, personnel, equipment, equipment manuals, Lockout/Tagout devices, forms, and references.

**STANDARD:** To ensure safety procedures are performed to prevent electrical mishaps per the references.

**PERFORMANCE STEPS:**
1. Review references.
2. Evaluate Lockout/Tagout Program using NAVMC 11402 (annual requirement).
3. Ensure availability of an ample supply of locks and tags.
4. Review/approve Lockout/Tagout Checklists, NAVMC 11403.
5. Maintain Lockout/Tagout Log, NAVMC 11404.
6. Control issue of Lockout/Tagout devices to authorized workers.
7. Ensure timely return of Lockout/Tagout devices.

**PREREQUISITE EVENTS:** 1169-ADMN-2002

**RELATED EVENTS:**
1141-ADMN-1002 1171-ADMN-1002 1161-ADMN-1002
1142-ADMN-1002

**REFERENCES:**
1. 29 CFR 1910.147 Chapter 29, Code of Federal Regulations, Part Number 1910 (Occupational Safety and Health Standards), Standard Number 147 - Control of Hazardous Energy (Lockout/Tagout)
2. NAVMC DIR 5100.8 Marine Corps Occupational Safety and Health (OSH) Program Manual (May 06)
3. UNIT SOP Unit's Standing Operating Procedures
4. Appropriate Technical Manuals

**SUPPORT REQUIREMENTS:**

**MATERIAL:**
- Lockout/Tagout devices
- NAVMC 11402 (Lockout/Tagout Program Evaluation)
- NAVMC 11403 (Lockout/Tagout Checklist)
- NAVMC 11404 (Lockout/Tagout Log)

**MISCELLANEOUS:**

**ADMINISTRATIVE INSTRUCTIONS:** NAVMC Dir 5100.8, Chapter 12, provides detailed instructions for this event. Initial training for this event is received in the Utilities Chief course (CID: M0311E2). Control of hazardous energy (Lockout/Tagout) is taught at all basic MOS producing courses in the Occupational Field.

**1120-ADMN-2003:** Recover an electric shock victim

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Utilities Officer

**GRADES:** WO-1, CWO-2, CWO-3, CWO-4, CWO-5

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Given an electrical mishap involving a potential casualty.

**STANDARD:** To ensure the performance of proper safety procedures to prevent further injury to personnel.

**PERFORMANCE STEPS:**
1. Evaluate situation.
2. Send for help.
3. Provide for personal protection.
4. Isolate victim from electrical source.
5. Evaluate victim.
6. Start artificial resuscitation (if necessary).
7. Remain with victim until medical help arrives.
8. Report incident.

**RELATED EVENTS:**

| | | |
|---|---|---|
| 1141-ADMN-1003 | 1142-ADMN-1003 | 1171-ADMN-1003 |
| 1169-ADMN-2003 | 1161-ADMN-1003 | |

**REFERENCES:**
1. FM 5-424 Theater of Operations Electrical Systems (Jun 97)
2. MCRP 3-02G First Aid (Dec 02)
3. TM 2000-15/4 Power System Reference Manual (Jul 68)
4. TM 9406-15 Grounding Procedures for Electromagnetic Interference Control and Safety (Aug 91)

**MISCELLANEOUS:**

**ADMINISTRATIVE INSTRUCTIONS:** Recovery of an electric shock victim is taught at all basic MOS producing courses in the Occupational Field.

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**1120-ADMN-2004:** Respond to a hazardous materials spill

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Utilities Officer

**GRADES:** WO-1, CWO-2, CWO-3, CWO-4, CWO-5

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Given a hazardous material mishap involving potential environmental damage.

**STANDARD:** To ensure the performance of proper containment procedures to prevent further environmental damage.

**PERFORMANCE STEPS:**
1. Evacuate immediate area (if necessary).
2. Contain spill.
3. Report spill.
4. Remove uncontaminated material.
5. Dispose of hazardous material.

**RELATED EVENTS:**

| | | |
|---|---|---|
| 1141-ADMN-1004 | 1142-ADMN-1004 | 1171-ADMN-1004 |
| 1169-ADMN-2004 | 1161-ADMN-1004 | |

**REFERENCES:**
1. MCO 4450.12A Storage and Handling of Hazardous Materials (Jan 99)
2. MCO P5090.2A Environmental Compliance and Protection Manual (Jul 98)
3. MCRP 4-11B Environmental Considerations in Military Operations (Jun 00)
4. UNIT SOP Unit's Standing Operating Procedures

**MISCELLANEOUS:**

**ADMINISTRATIVE INSTRUCTIONS:** Responding to a hazardous materials spill is taught at all basic MOS producing courses in the Occupational Field.

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**1120-ADMN-2005:** Administer first aid for chemical ingestion/contact

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Utilities Officer

**GRADES:** WO-1, CWO-2, CWO-3, CWO-4, CWO-5

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Given a chemical mishap involving a potential casualty, Material Safety Data Sheets (MSDS).

**STANDARD:** To ensure the performance of proper safety procedures to prevent further injury to personnel.

**PERFORMANCE STEPS:**
1. Protect yourself and other personnel.
2. Send for help.
3. Review Material Safety Data Sheet (MSDS).
4. Provide for personal protection (PPE) (if required).
5. Give first aid.
6. Remain with victim until medical help arrives.
7. Report incident.

**RELATED EVENTS:**

| | | |
|---|---|---|
| 1141-ADMN-1005 | 1142-ADMN-1005 | 1171-ADMN-1005 |
| 1169-ADMN-2005 | 1161-ADMN-1005 | |

**REFERENCES:**
1. MCRP 3-02G First Aid (Dec 02)

**SUPPORT REQUIREMENTS:**

**EQUIPMENT:** Personal Protective Equipment (PPE).

**MATERIAL:** Material Safety Data Sheet (MSDS) file.

**MISCELLANEOUS:**

**ADMINISTRATIVE INSTRUCTIONS:** First aid for chemical ingestion/contact is taught at all basic MOS producing courses in the Occupational Field.

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**1120-ADMN-2006:** Monitor publications control

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 3 months

**BILLETS:** Utilities Officer

**GRADES:** WO-1, CWO-2, CWO-3, CWO-4, CWO-5

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Provided unit's Publications Listing (PL) and Table of Organization and Equipment (T/O&E), access to publications websites and management systems, and references.

**STANDARD:** To ensure required publications are available to maintain section's operational capabilities and readiness per the references.

**PERFORMANCE STEPS:**
1. Review references.
2. Identify publication requirements based on mission and T/O&E.
3. Audit section's PL.
4. Validate on-hand publications inventory.
5. Inspect section's library for missing or outdated publications.
6. Verify published changes are made to publications.
7. Evaluate control procedures.
8. Evaluate NAVMC 10772 procedures.
9. Correct deficiencies.

**PREREQUISITE EVENTS:** 1169-ADMN-2006

**RELATED EVENTS:** 1120-ADMN-2012

**REFERENCES:**
1. MCO 4400.120A Joint Regulation Governing the Use and Application of Uniform Source Maintenance and Recoverability Codes (Mar 03)
2. MCO 5215.1K Marine Corps Directives Management Program
3. MCO 5600.20P Marine Corps Doctrinal Publications System (Nov 06)
4. MCO P4790.2C MIMMS Field Procedures Manual (JUL 94)
5. MCO P5215.17C The Marine Corps Technical Publications System (Jun 96)
6. MCO P5600.31G Marine Corps Publications and Printing Regulations (Sep 93)

7. SECNAV M-5210.2 Standard Subject Identification Code (SSIC) Manual
8. UNIT SOP Unit's Standing Operating Procedures

**SUPPORT REQUIREMENTS:**

**OTHER SUPPORT REQUIREMENTS:** Internet access, with a CAC card, is required in order to complete this event.

**MISCELLANEOUS:**

**ADMINISTRATIVE INSTRUCTIONS:** Initial training for this event is received in the Utilities Chief course (CID: M0311E2).

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**1120-ADMN-2007:** Validate equipment SL-3/BII inventories

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Utilities Officer

**GRADES:** WO-1, CWO-2, CWO-3, CWO-4, CWO-5

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Provided personnel, equipment, and references.

**STANDARD:** To ensure accountability of all equipment components per the SL-3/BII list and the references.

**PERFORMANCE STEPS:**
1. Review references.
2. Review item inventory requirements (SL-3 Components List or TM listing Basic Issue Items [BII]).
3. Schedule inventories.
4. Validate inventories.
5. Ensure deficiencies are requisitioned/acquired.
6. Ensure inventories are documented.

**PREREQUISITE EVENTS:** 1169-ADMN-2007

**RELATED EVENTS:**
1141-ADMN-1007 1171-ADMN-1007 1161-ADMN-1007
1142-ADMN-1007

**REFERENCES:**
1. MCO P4400.150E Consumer-Level Supply Policy Manual (Jun 99)
2. MCO P4790.2C MIMMS Field Procedures Manual (JUL 94)
3. TM 4700-15/1H Ground Equipment Record Procedures (Jul 95)
4. UM 4400-124 FMF SASSY Using Unit Procedures
5. UNIT SOP Unit's Standing Operating Procedures

**MISCELLANEOUS:**

**ADMINISTRATIVE INSTRUCTIONS:** Initial training for this event is received in the Utilities Chief course (CID: M0311E2).

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**1120-ADMN-2012:** Validate a Recommended Change to Technical Publications/Logistics-Maintenance Data Coding (NAVMC 10772)

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Utilities Officer

**GRADES:** WO-1, CWO-2, CWO-3, CWO-4, CWO-5

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Provided a completed NAVMC 10772 and the references.

**STANDARD:** To ensure corrections/improvements to technical publication(s) is submitted per the references.

**PERFORMANCE STEPS:**
1. Review references.
2. Audit NAVMC 10772.
3. Review affected technical manual to verify recommended change will correct the error/deficiency.
4. If applicable, approve Part II with signature and date.
5. Forward NAVMC 10772 per unit's SOP (on line if applicable).

**PREREQUISITE EVENTS:** 1169-ADMN-2012

**RELATED EVENTS:** 1120-ADMN-2006

**REFERENCES:**
1. MCO P5215.17C The Marine Corps Technical Publications System (Jun 96)
2. TM 4700-15/1H Ground Equipment Record Procedures (Jul 95)
3. UNIT SOP Unit's Standing Operating Procedures
4. Appropriate Technical Manuals

**SUPPORT REQUIREMENTS:**

**OTHER SUPPORT REQUIREMENTS:** Internet access, with a CAC card, may be required in order to complete this event per Unit's SOP. The website used will be https://pubs.logcom.usmc.mil.

**MISCELLANEOUS:**

**ADMINISTRATIVE INSTRUCTIONS:** Initial training for this event is received in the Utilities Chief course (CID: M0311E2).

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**1120-ADMN-2021:** Enforce safety programs

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Utilities Officer

**GRADES:** WO-1, CWO-2, CWO-3, CWO-4, CWO-5

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Provided resources and references.

**STANDARD:** To ensure applicable safety measures and procedures are in place per the references.

**PERFORMANCE STEPS:**
1. Review references.
2. Validate equipment safety requirements.
3. Validate personnel safety requirements.
4. Validate Operational Risk Assessments.
5. Implement safety procedures.
6. Monitor safety awareness training.
7. Monitor safety programs.
8. Enforce safety regulations.
9. Provide input for/submit required reports.

**PREREQUISITE EVENTS:**
1120-ADMN-2002 1120-ADMN-2001 1169-ADMN-2021

**REFERENCES:**
1. DOD 6055.1 DOD Occupational Safety and Health (OSH) Program
2. MCO 3500.27B Operational Risk Management (ORM) (MAY 2004)
3. MCO 5100.19_ W/CH 1-3 Marine Corps Traffic Safety Program (DRIVESAFE)
4. MCO 5100.29A Marine Corps Safety Program (Jul 04)
5. MCO 5100.30A Marine Corps Off-Duty and Recreation Safety Program (Oct 01)
6. MCO 5100.34 Deadline Safety of Use Message Instructions to Suspend Operations of Marine Corps Ground Equipment and Weapons Systems and Safety of Use Alerts (Jan 07)
7. MCO 5100.8 Marine Corps Occupational Safety and Health (OSH) Policy Order (May 06)
8. MCO 5104.2 Marine Corps Radiofrequency Electromagnetic Field Personnel Protection Program (Apr 95)
9. MCO 5104.3A Marine Corps Radiation Safety Program (Jun 03)
10. MCO P4790.2C MIMMS Field Procedures Manual (JUL 94)
11. MCO P5102.1B Navy & Marine Corps Mishap and Safety Investigation, Reporting, and Record Keeping Manual (Jan 05)
12. NAVMC DIR 5100.8 Marine Corps Occupational Safety and Health (OSH) Program Manual (May 06)
13. OPNAVINST 5100.23G Navy Safety and Occupational Health (SOH) Program Manual (Dec 05)
14. UNIT SOP Unit's Standing Operating Procedures

**MISCELLANEOUS:**

**ADMINISTRATIVE INSTRUCTIONS:** Initial training for this event is received in the Utilities Chief course (CID: M0311E2).

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**1120-ADMN-2022:** Enforce environmental regulations

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Utilities Officer

**GRADES:** WO-1, CWO-2, CWO-3, CWO-4, CWO-5

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Provided resources and references.

**STANDARD:** To ensure environmental policies and procedures are adhered to per the references.

**PERFORMANCE STEPS:**
1. Review references.
2. Inspect section's compliance with applicable environmental regulations and restrictions.
3. Manage platoon/section hazardous material disposal program.
4. Maintain hazardous materials storage areas.
5. Inspect Material Safety Data Sheets (MSDS).
6. Report any situations that require reporting.
7. Conduct environmental regulations compliance planning for unit field operations.
8. Provide input for unit SOPs and environmental impact statements.

**PREREQUISITE EVENTS:**
1169-ADMN-2022 1120-ADMN-2004

**REFERENCES:**
1. MCO 4450.12A Storage and Handling of Hazardous Materials (Jan 99)
2. MCO P5090.2A Environmental Compliance and Protection Manual (Jul 98)
3. MCRP 4-11B Environmental Considerations in Military Operations (Jun 00)
4. OPNAVINST 5090.1C Environmental Readiness Program Manual (Oct 07)
5. UNIT SOP Unit's Standing Operating Procedures

**MISCELLANEOUS:**

**ADMINISTRATIVE INSTRUCTIONS:** Initial training for this event is received in the Utilities Chief course (CID: M0311E2).

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**1120-ADMN-2023:** Manage Military Occupational Specialty (MOS) training program

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Utilities Officer

**GRADES:** WO-1, CWO-2, CWO-3, CWO-4, CWO-5

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Provided training resources, records, and references.

**STANDARD:** To ensure MOS proficiency is maintained per the references.

**PERFORMANCE STEPS:**
1. Review references.
2. Verify individual training requirements (review T&R Manual and MOS Roadmaps).
3. Verify unit training requirements (review unit METL/Commander's intent).

4. Develop training program policies and procedures.
5. Validate on the job and sustainment training requirements by grade and MOS.
6. Plan MOS training program (considering apprenticeship programs).
7. Review lesson plans.
8. Review training methods/aids/materials.
9. Schedule MOS sustainment training.
10. Develop Letter of Instruction (LOI).
11. Ensure training is conducted.
12. Ensure lesson plans are maintained.
13. Ensure training is documented.
14. Evaluate training.
15. Encourage use of self-directed study and assist in providing resources.

**PREREQUISITE EVENTS:** 1169-ADMN-2023

**REFERENCES:**
1. DODD 1322.18 Military Training (Sep 04)
2. MCO 1553.1B The Marine Corps Training and Education System (May 91)
3. MCO 1553.2A Management of Marine Corps Formal Schools and Training Detachments (Nov 03)
4. MCO 1553.3A Unit Training Management (UTM) (Jan 04)
5. MCO 3500.26A Marine Corps Task List (MCTL-2.0)
6. MCO P1553.4_ Professional Military Education (PME)
7. MCO P1560.25C Marine Corps Lifelong Learning Program (Dec 99)
8. MCO P3500.72A Marine Corps Ground Training and Readiness (T&R) Program (Apr 05)
9. MCRP 3-0A Unit Training Management Guide
10. MCRP 3-0B How to Conduct Training
11. NAVMC 3500.12 Marine Corps Engineer and Utilities Training and Readiness Manual
12. OPNAVINST 1560.10C Administration of the United Services Military Apprenticeship Program (USMAP) (Apr 07)
13. SAT MANUAL Systems Approach to Training (SAT) Manual (Jun 04)
14. UNIT SOP Unit's Standing Operating Procedures

**SUPPORT REQUIREMENTS:**

**OTHER SUPPORT REQUIREMENTS:** MOS Roadmaps are located at http://www.tecom.usmc.mil/g3/roadmap.htm.

**MISCELLANEOUS:**

**ADMINISTRATIVE INSTRUCTIONS:** Initial training for this event is received in the Utilities Chief course (CID: M0311E2).

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**1120-ADMN-2031:** Brief electrical safety to end users

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Utilities Officer

**GRADES:** WO-1, CWO-2, CWO-3, CWO-4, CWO-5

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Provided a field electrical power generation and distribution system plan, sample warning signs, and references.

**STANDARD:** To ensure the compliance with established safety directives to prevent injury to personnel per the references.

**PERFORMANCE STEPS:**
1. Review electrical system plan and references.
2. Identify prohibited electrical equipment.
3. Identify prohibited practices.
4. Identify unsafe conditions.
5. Identify "Off Limit" areas.
6. Identify emergency procedures.
7. Assemble briefing notes and materials.
8. Deliver brief.
9. Monitor electrical safety compliance.

**PREREQUISITE EVENTS:**
1169-ADMN-2031 1120-ADMN-2001

**RELATED EVENTS:**
1120-ADMN-2003 1120-ADMN-2002 1120-ADMN-2021

**REFERENCES:**
1. 29 CFR 1910.269 Chapter 29, Code of Federal Regulations, Part Number 1910 (Occupational Safety and Health Standards), Standard Number 269 - Electrical Power Generation, Transmission, and Distribution
2. 29 CFR 1910.301-399 Chapter 29, Code of Ferderal Regulations, Part Number 1910 (Occupational Safety and Health Standards), Subpart S, (Standard Numbers 301-399) - Electrical
3. DODI 6055.1 DoD Safety and Occupational Health (SOH) Program (Aug 98)
4. FM 5-424 Theater of Operations Electrical Systems (Jun 97)
5. MCO 3500.27B Operational Risk Management (ORM) (MAY 2004)
6. MCO 5100.29A Marine Corps Safety Program (Jul 04)
7. MCRP 5-12.1C Risk Management (Feb 01)
8. NAVMC DIR 5100.8 Marine Corps Occupational Safety and Health (OSH) Program Manual (May 06)
9. NFPA 70 - NEC 2008 National Fire Protection Association (NFPA) National Electrical Code (NEC) - 2008 Edition
10. TM 11275-15/3D Principal Technical Characteristics of U.S. Marine Corps Engineer Equipment (May 02)
11. Appropriate Technical Manuals

**SUPPORT REQUIREMENTS:**

**MATERIAL:** Sample warning signs.

**MISCELLANEOUS:**

**ADMINISTRATIVE INSTRUCTIONS:** Initial training for this event is received in the Utilities Chief course (CID: M0311E2).

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**1120-ADMN-2041:** Validate a Product Quality Deficiency Report (PQDR) (SF 368)

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Utilities Officer

**GRADES:** WO-1, CWO-2, CWO-3, CWO-4, CWO-5

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Provided a completed Product Quality Deficiency Report (PQDR), access to the defective item and references.

**STANDARD:** To ensure identified deficiency has been correctly annotated on the proper forms per the references.

**PERFORMANCE STEPS:**
1. Review references.
2. Ensure deficiency requires a PQDR.
3. Determine if deficiency is Category I or Category II.
4. Verify exhibit is controlled (if required).
5. Audit DD Forms 1575 and 2332 (if required).
6. Audit PQDR (SF 368).
7. Ensure PQDR is submitted to the Marine Corps PQDR Screening Point.

**PREREQUISITE EVENTS:** 1169-ADMN-2041

**REFERENCES:**
1. MCO 4400.120A Joint Regulation Governing the Use and Application of Uniform Source Maintenance and Recoverability Codes (Mar 03)
2. MCO 4400.16G Uniform Materiel Movement and Issue Priority System (Jun 85)
3. MCO 4855.10B Product Quality Deficiency Report (PQDR) (Jan 93)
4. MCO P4400.150E Consumer-Level Supply Policy Manual (Jun 99)
5. MCO P4400.82F Regulated/Controlled Item Management Manual (Feb 85)
6. TM 4700-15/1H Ground Equipment Record Procedures (Jul 95)
7. UM 4400-124 FMF SASSY Using Unit Procedures
8. UNIT SOP Unit's Standing Operating Procedures
9. Appropriate Technical Manuals

**SUPPORT REQUIREMENTS:**

**MATERIAL:**
- DD Form 1575 (Suspended Tag - Materiel)
- DD Form 2332 (Product Quality Deficiency Report Exhibit)
- SF 368 (Product Quality Deficiency Report [PQDR])

**MISCELLANEOUS:**

**ADMINISTRATIVE INSTRUCTIONS:** Initial training for this event is received in the Utilities Chief course (CID: M0311E2). Additional information for this event can be found at www.logcom.usmc.mil/pqdr.

**1120-ADMN-2051:** Manage preventive maintenance

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Utilities Officer

**GRADES:** WO-1, CWO-2, CWO-3, CWO-4, CWO-5

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Provided equipment records, maintenance management reports, forms and references.

**STANDARD:** To ensure maintenance activity processes are properly performed to maintain equipment in an operational status per the reference.

**PERFORMANCE STEPS:**
1. Review references.
2. Audit NAVMC 10561.
3. Audit maintenance management reports.
4. Determine maintenance priorities.
5. Validate support and test equipment assets and requirements.
6. Ensure PMCS schedule is followed.
7. Ensure PMCS actions are documented.

**PREREQUISITE EVENTS:** 1169-ADMN-2051

**REFERENCES:**
1. MCO 4733.1B Marine Corps Test, Measurement, and Diagnostic Equipment (TMDE) Calibration and Maintenance Program (CAMP) (Jun 99)
2. MCO P4790.2C MIMMS Field Procedures Manual (JUL 94)
3. TI 4733-15/1 Calibration Requirements Test, Measurement and Diagnostic Equipment (TMDE) Calibration and Maintenance Program
4. TM 4700-15/1H Ground Equipment Record Procedures (Jul 95)
5. UNIT SOP Unit's Standing Operating Procedures
6. Appropriate Technical Manuals

**SUPPORT REQUIREMENTS:**

**MATERIAL:** NAVMC 10561 (Preventive Maintenance Checks and Services (PMCS) Roster)

**MISCELLANEOUS:**

**ADMINISTRATIVE INSTRUCTIONS:** Initial training for this event is received in the Utilities Chief course (CID: M0311E2).

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**1120-ADMN-2052:** Manage corrective maintenance

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Utilities Officer

**GRADES:** WO-1, CWO-2, CWO-3, CWO-4, CWO-5

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Provided updated equipment records and maintenance management reports, and references.

**STANDARD:** To ensure maintenance activity processes are properly performed to restore equipment to an operational status per the reference.

**PERFORMANCE STEPS:**
1. Review references.
2. Audit Daily Process Report (DPR) and other maintenance management reports.
3. Determine support and test equipment assets and requirements.
4. Determine maintenance priorities.
5. Ensure repairs are made.
6. Ensure repair actions are documented.

**PREREQUISITE EVENTS:** 1169-ADMN-2052

**REFERENCES:**
1. MCO 4733.1B Marine Corps Test, Measurement, and Diagnostic Equipment (TMDE) Calibration and Maintenance Program (CAMP) (Jun 99)
2. MCO P4790.2C MIMMS Field Procedures Manual (JUL 94)
3. TI 4733-15/1 Calibration Requirements Test, Measurement and Diagnostic Equipment (TMDE) Calibration and Maintenance Program
4. TM 4700-15/1H Ground Equipment Record Procedures (Jul 95)
5. UNIT SOP Unit's Standing Operating Procedures
6. Appropriate Technical Manuals

**MISCELLANEOUS:**

**ADMINISTRATIVE INSTRUCTIONS:** Initial training for this event is received in the Utilities Chief course (CID: M0311E2).

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**1120-ADMN-2061:** Manage section's supply support

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Utilities Officer

**GRADES:** WO-1, CWO-2, CWO-3, CWO-4, CWO-5

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Provided maintenance-related reports (MIMMS-AIS), appropriate equipment-related publications, and references.

**STANDARD:** To ensure section readiness in maintained.

**PERFORMANCE STEPS:**
1. Review references.
2. Coordinate supply support requirements with unit's supply section.
3. Validate equipment SL-3 Using Unit Responsibility Items (UURI) requirements.
4. Provide input for field budget requirements.

5. Manage execution of allocated funding.
6. Determine maintenance requirements.
7. Determine supply requirements.
8. Determine fuel requirements.
9. Manage shop/section PEB and repair order layette procedures.
10. Ensure parts, supplies, and fuel are obtained.
11. Manage shop/section validation/reconciliation procedures.
12. Ensure required documentation is maintained.

**RELATED EVENTS:** 1169-ADMN-2061

**REFERENCES:**
1. MCO 4105.2 Marine Corps Warranty Program (Nov 87)
2. MCO 4340.1_ Reporting of Missing, Lost, Stolen, or Recovered (MLSR) Government Property (Aug 94)
3. MCO 4400.120A Joint Regulation Governing the Use and Application of Uniform Source Maintenance and Recoverability Codes (Mar 03)
4. MCO 4400.16G Uniform Materiel Movement and Issue Priority System (Jun 85)
5. MCO 4410.9G Assignment of Local Stock Numbers and Criteria for Determining Assignment of National Stock Numbers (Aug 93)
6. MCO 4450.12A Storage and Handling of Hazardous Materials (Jan 99)
7. MCO 4733.1B Marine Corps Test, Measurement, and Diagnostic Equipment (TMDE) Calibration and Maintenance Program (CAMP) (Jun 99)
8. MCO 4790.18B Corrosion Prevention and Control (CPAC) Program (Jul 04)
9. MCO 7510.5A Marine Corps Fraud, Waste, and Abuse (FWA) Oversight, Awareness, Prevention, and Remedies (Aug 86)
10. MCO P4050.38C Personal Effects and Baggage Manual (Apr 01)
11. MCO P4400.150E Consumer-Level Supply Policy Manual (Jun 99)
12. MCO P4400.82F Regulated/Controlled Item Management Manual (Feb 85)
13. MCO P4790.2C MIMMS Field Procedures Manual (JUL 94)
14. MCO P7100.8K Field Budget Guidance Manual
15. MCO P7300.21 Marine Corps Financial Execution Standard Operating Procedure Manual
16. NAVMC 2664 Financial Guidebook for Commanders
17. SECNAVINST 4355.18A Reporting of Supply Discrepancies (Jan 99)
18. TM 4700-15/1H Ground Equipment Record Procedures (Jul 95)
19. TM 4795-12/1 Organizational Corrosion Prevention and Control Procedures
20. UM 4400-124 FMF SASSY Using Unit Procedures
21. UM-4790-5 MIMMS-AIS Field Maintenance Procedures
22. UNIT SOP Unit's Standing Operating Procedures

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**1120-ADMN-2062:** Place new equipment in service

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Utilities Officer

**GRADES:** WO-1, CWO-2, CWO-3, CWO-4, CWO-5

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Provided new equipment, Users Logistics Support Summary (ULSS) or Fielding Plan (FP), and references.

**STANDARD:** So equipment is supported by maintainers and operators per the references.

**PERFORMANCE STEPS:**
1. Review equipment's Fielding Plan (FP).
2. Establish a training plan for the new equipment.
3. Determine licensing requirements.
4. Determine impact on unit's budget.

**PREREQUISITE EVENTS:** 1169-ADMN-2062

**REFERENCES:**
1. MCO P4400.150E Consumer-Level Supply Policy Manual (Jun 99)
2. UNIT SOP Unit's Standing Operating Procedures

**MISCELLANEOUS:**

**ADMINISTRATIVE INSTRUCTIONS:** Initial training for this event is received in the Utilities Chief course (CID: M0311E2).

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**1120-ADMN-2065:** Manage equipment availability

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Utilities Officer

**GRADES:** WO-1, CWO-2, CWO-3, CWO-4, CWO-5

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Provided updated MIMMS (AIS) reports, supporting documentation, and references.

**STANDARD:** To ensure accurate knowledge of the maintenance situation per the references.

**PERFORMANCE STEPS:**
1. Identify shortages/excesses.
2. Review readiness.
3. Review priority designator assignments.
4. Review maintenance cycle time.
5. Develop a plan to increase equipment availability.

**REFERENCES:**
1. MCBUL 3000 Table of Marine Corps Ground Equipment Resources Reporting
2. MCO 3000.11D Marine Corps Automated Readiness Evaluation System (MARES) (Feb 04)
3. MCO 4400.16G Uniform Materiel Movement and Issue Priority System (Jun 85)
4. MCO P4400.150E Consumer-Level Supply Policy Manual (Jun 99)
5. MCO P4790.2C MIMMS Field Procedures Manual (JUL 94)
6. UM-4790-5 MIMMS-AIS Field Maintenance Procedures
7. UNIT SOP Unit's Standing Operating Procedures

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**1120-ADMN-2071:** Validate maintenance management reports

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Utilities Officer

**GRADES:** WO-1, CWO-2, CWO-3, CWO-4, CWO-5

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Provided updated MIMMS (AIS) reports, supporting documentation, and references.

**STANDARD:** To ensure accurate knowledge of the maintenance situation per the references.

**PERFORMANCE STEPS:**
1. Monitor Daily Process Report (DPR).
2. Monitor Daily Transaction Listing (DTL).
3. Monitor Daily SASSY transactions.
4. Monitor Daily LM2 Report.
5. Monitor Weekly TAM Report.
6. Monitor Weekly Maintenance Exceptions Report.
7. Monitor Weekly LM2 Report.
8. Monitor Weekly Material Report
9. Monitor Weekly Shop Summary Report.
10. Monitor Class II Reports.

**REFERENCES:**
1. MCBUL 3000 Table of Marine Corps Ground Equipment Resources Reporting
2. MCO 3000.11D Marine Corps Automated Readiness Evaluation System (MARES) (Feb 04)
3. MCO 4400.16G Uniform Materiel Movement and Issue Priority System (Jun 85)
4. MCO P4790.2C MIMMS Field Procedures Manual (JUL 94)
5. TM 4700-15/1H Ground Equipment Record Procedures (Jul 95)
6. UM 4400-124 FMF SASSY Using Unit Procedures
7. UM-4790-5 MIMMS-AIS Field Maintenance Procedures
8. UNIT SOP Unit's Standing Operating Procedures

**MISCELLANEOUS:**

**ADMINISTRATIVE INSTRUCTIONS:** Initial training for this event is received in the Utilities Chief course (CID: M0311E2).

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**1120-ADMN-2072:** Manage maintenance related programs

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Utilities Officer

**GRADES:** WO-1, CWO-2, CWO-3, CWO-4, CWO-5

**INITIAL TRAINING SETTING:** Provided equipment and references.

**STANDARD:** To ensure equipment readiness is maintained to support unit operations.

**PERFORMANCE STEPS:**
1. Review references.
2. Determine unit's maintenance program requirements.
3. Inspect equipment.
4. Manage Modification Control program.
5. Manage Calibration Control program.
6. Manage New Equipment Warranty program.
7. Manage Joint Oil Analysis Program (JOAP).
8. Manage Replacement Evacuation (R&E) program.
9. Manage Quality Deficiency (QDR) program.
10. Manage Recoverable Items (WIR) program.
11. Manage Quality Control (QC) program.
12. Manage Corrosion Prevention and Control (CPAC) program.
13. Ensure program and equipment records are maintained.

**PREREQUISITE EVENTS:** 1169-ADMN-2072

**RELATED EVENTS:**

| | | |
|---|---|---|
| 1120-ADMN-2051 | 1120-ADMN-2052 | 1120-ADMN-2041 |
| 1120-ADMN-2071 | 1120-ADMN-2065 | |

**REFERENCES:**
1. MCO 4400.194 Class VII Stock Rotation Program
2. MCO 4731.1A Oil Analysis Program for Ground Equipment (Nov 90)
3. MCO 4733.1B Marine Corps Test, Measurement, and Diagnostic Equipment (TMDE) Calibration and Maintenance Program (CAMP) (Jun 99)
4. MCO 4790.18B Corrosion Prevention and Control (CPAC) Program (Jul 04)
5. MCO P4400.150E Consumer-Level Supply Policy Manual (Jun 99)
6. MCO P4400.82F Regulated/Controlled Item Management Manual (Feb 85)
7. MCO P4790.2C MIMMS Field Procedures Manual (JUL 94)
8. TI 4733-15/1 Calibration Requirements Test, Measurement and Diagnostic Equipment (TMDE) Calibration and Maintenance Program
9. TI-4731-14/1C MC Joint Oil Analysis Program
10. TM 4700-15/1H Ground Equipment Record Procedures
11. TM 750-245-4 Direct Support, General Support Quality Control Inspector's Inspection Criteria
12. UNIT SOP Unit's Standing Operating Procedures
13. Appropriate Technical Manuals

**MISCELLANEOUS:**

**ADMINISTRATIVE INSTRUCTIONS:** Initial training for this event is received in the Utilities Chief course (CID: M0311E2). Some programs listed above may not be required at all units.

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**1120-ADMN-2073:** Manage equipment records

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Utilities Officer

**GRADES:** WO-1, CWO-2, CWO-3, CWO-4, CWO-5

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Provided equipment, updated records, forms, and references.

**STANDARD:** To ensure section readiness can be determined per the references.

**PERFORMANCE STEPS:**
1. Review references.
2. Identify records requirements.
3. Ensure records are established for each piece of equipment.
4. Manage records.

**PREREQUISITE EVENTS:** 1169-ADMN-2073

**REFERENCES:**
1. MCBUL 3000 Table of Marine Corps Ground Equipment Resources Reporting
2. MCO 3000.11D Marine Corps Automated Readiness Evaluation System (MARES) (Feb 04)
3. MCO 4733.1B Marine Corps Test, Measurement, and Diagnostic Equipment (TMDE) Calibration and Maintenance Program (CAMP) (Jun 99)
4. MCO 5210.11E Marine Corps Records Management Program (Apr 06)
5. MCO 5213.7C Marine Corps Forms Management Program (May 90)
6. MCO P3000.13 Marine Corps Status of Resources and Training System (SORTS)
7. MCO P4790.2C MIMMS Field Procedures Manual (JUL 94)
8. TI 4733-15/1 Calibration Requirements Test, Measurement and Diagnostic Equipment (TMDE) Calibration and Maintenance Program
9. TM 4700-15/1H Ground Equipment Record Procedures (Jul 95)
10. UM 4400-124 FMF SASSY Using Unit Procedures
11. UM-4790-5 MIMMS-AIS Field Maintenance Procedures
12. UNIT SOP Unit's Standing Operating Procedures

**MISCELLANEOUS:**

**ADMINISTRATIVE INSTRUCTIONS:** Initial training for this event is received in the Utilities Chief course (CID: M0311E2).

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**1120-ADMN-2074:** Validate Maintenance Shop procedures

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Utilities Officer

**GRADES:** WO-1, CWO-2, CWO-3, CWO-4, CWO-5

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Provided completed maintenance management checklists and references.

**STANDARD:** To ensure all functional areas are certified mission capable.

**PERFORMANCE STEPS:**
1. Review checklists.
2. Gather/review the required checklist references.
3. Inspect shop functional areas.
4. Administer corrective actions, as necessary.

**REFERENCES:**
1. MCO P4790.2C MIMMS Field Procedures Manual (JUL 94)
2. UNIT SOP Unit's Standing Operating Procedures

**MISCELLANEOUS:**

**ADMINISTRATIVE INSTRUCTIONS:** There are numerous Marine Corps websites that have downloadable checklists. However, it is recommend that the checklists used for this event be obtained from local inspectors.

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**1120-ADMN-2075:** Establish field maintenance

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Utilities Officer

**GRADES:** WO-1, CWO-2, CWO-3, CWO-4, CWO-5

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Given an Operation Order, environmental impact report, camp layout, equipment, resources, and references.

**STANDARD:** To ensure maintenance activities are established in an expeditionary environment in accordance with references.

**PERFORMANCE STEPS:**
1. Review Operation Order, environmental impact report, camp layout, and the references.
2. Plan field maintenance operation.
3. Obtain contingency RUCs/JONs, etc.
4. Validate utilities portions of contingency Class IX repair parts block.
5. Determine safety/environmental considerations.
6. Manage field maintenance facility set up.
7. Recover field maintenance facility.

**RELATED EVENTS:**

| | | |
|---|---|---|
| 1120-ADMN-2073 | 1120-ADMN-2074 | 1120-ADMN-2065 |
| 1120-ADMN-2052 | 1120-ADMN-2021 | 1120-ADMN-2022 |
| 1120-ADMN-2051 | 1120-ADMN-2071 | |

**REFERENCES:**
1. MCO P4790.2C MIMMS Field Procedures Manual (JUL 94)
2. TM 4700-15/1H Ground Equipment Record Procedures (Jul 95)
3. UM-4790-5 MIMMS-AIS Field Maintenance Procedures
4. UNIT SOP Unit's Standing Operating Procedures

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**1120-ADMN-2081:** Monitor equipment embarkation requirements

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Utilities Officer

**GRADES:** WO-1, CWO-2, CWO-3, CWO-4, CWO-5

**INITIAL TRAINING SETTING:** MOJT

**CONDITION:** Provided a mission, equipment, and references.

**STANDARD:** To ensure the unit's ability to rapidly deploy in accordance with references.

**PERFORMANCE STEPS:**
1. Review MDSS II, MAGTF II LOGAIS, and/or JOPES reports.
2. Inspect assigned equipment.
3. Identify Remain Behind Equipment (RBE).
4. Identify Leave Behind Equipment (LBE).
5. Determine safety/environmental considerations.
6. Brief personnel.
7. Ensure equipment is marked for transportation/embarkation to include LOGMARS labels.
8. Ensure equipment is disassembled, stowed, packed, and/or prepared for transportation/embarkation.
9. Coordinate with unit embark chief to ensure discrepancies with MDSS II, MAGTF II LOGAIS, and/or JOPES reports are corrected.

**REFERENCES:**
1. DODD 4500.9 Transportation and Traffic Management
2. FM 101-10-1_ Organizational, Technical and Logistical Data
3. FM 55-15 Transportation Reference Data
4. FM 55-9 Unit Air Movement Planning
5. FMFM 3-1 Command and Staff Action
6. FMFM 4-6 Movement of Units in Air Force Aircraft
7. JOINT PUB 3-02 Joint Doctrine for Amphibious Operations
8. MCO 4610.35 USMC Equipment Characteristics File
9. MCO P4030.19_ Preparing Hazardous Materials for Military Air Shipments
10. MCO P4600.7_ USMC Transportation Manual
11. MCWP 3-31.5 Ship-to-Shore Movement
12. MCWP 4-11.3 Transportation Operations
13. MCWP 5-1 Marine Corps Planning Process
14. NAVMC DIR 3000.18 Marine Corps Force Deployment Planning and Execution Process Manual
15. TM 4700-15/1H Ground Equipment Record Procedures (Jul 95)
16. TM 55-2200-001-12 Application of Blocking, Bracing, and Tie Down Material

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**1120-ADMN-2082:** Manage equipment operator licensing program

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Utilities Officer

**GRADES:** WO-1, CWO-2, CWO-3, CWO-4, CWO-5

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Provided personnel, supporting documentation, and references.

**STANDARD:** To ensure operators meet the necessary criteria to maintain a current licensing qualification to operate the unit's equipment per the references.

**PERFORMANCE STEPS:**
1. Review references.
2. Determine operator licensing requirements.
3. Review Operator History File.
4. Review equipment training and testing programs.
5. Review Action Date File to ensure timely renewal actions.
6. Review and approve or reject license applications (and renewals).
7. Review and approve completed OF 346 (U.S. Government Motor Vehicle Operator's Identification Card).
8. Ensure all issued licenses are recorded in the License Log Book.
9. Ensure any licensing action (issues/renewals/revocations) is recorded in the individual's Service Record Book (SRB).

**REFERENCES:**
1. MCO 11240.66_ Standard Licensing Policy for Operators of Military Motor Vehicles
2. MCO 6260.1E Marine Corps Hearing Conservation Program (Apr 00)
3. MCO P4790.2C MIMMS Field Procedures Manual (JUL 94)
4. TM 11240-15/3F Motor Vehicle Licensing Official's Manual
5. TM 11275-15/4 Tactical Engineer Equipment Licensing Examiner's Manual (Jun 83)
6. UNIT SOP Unit's Standing Operating Procedures

**MISCELLANEOUS:**

**ADMINISTRATIVE INSTRUCTIONS:** Initial training for this event is received in the Utilities Chief course (CID: M0311E2).

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**1120-ADMN-2091:** Brief utilities support plan

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Utilities Officer

**GRADES:** WO-1, CWO-2, CWO-3, CWO-4, CWO-5

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Given an Operation Order, site survey, cantonment plan, and references.

**STANDARD:** To ensure command staff is aware of utilities support capabilities in accordance with commander's intent.

**PERFORMANCE STEPS:**
1. Determine briefing requirements.
2. Gather briefing materials.
3. Present information.
4. Answer questions, as required.

**REFERENCES:**
1. FM 101-5 Staff Organization and Operations
2. MCWP 5-1 Marine Corps Planning Process

**MISCELLANEOUS:**

**ADMINISTRATIVE INSTRUCTIONS:** Initial training for this event is received in the Utilities Chief course (CID: M0311E2).

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**1120-XENG-2501:** Plan a utilities site survey

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Utilities Officer

**GRADES:** WO-1, CWO-2, CWO-3, CWO-4, CWO-5

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Given a mission, commander's intent, map, and references.

**STANDARD:** To ensure Commanders' Critical Information Requirements (CCIR) are answered, in order to plan utilities support in compliance with the mission, commander's intent, and references.

**PERFORMANCE STEPS:**
1. Review mission, enemy, terrain and weather, troops and fire support available - time available, space, and logistics (METT-TSL).
2. Review commander's intent.
3. Review map.
4. Research CCIRs on available host nation/local vendor support.
5. Research CCIRs on water sources.
6. Research CCIRs for water storage sites.
7. Research CCIRs for hygiene sites.
8. Research CCIRs on waste water disposal.
9. Research CCIRs for refrigeration sites.
10. Research CCIRs for generator sites.
11. Research CCIRs on electrical power distribution requirements.
12. Prioritize CCIRs.

**REFERENCES:**
1. FM 10-52 Water Supply in Theaters of Operation
2. FM 10-52-1 Water Supply Point Equipment and Operations
3. FM 3-34.471 Plumbing, Pipefitting, and Sewerage
4. FM 5-424 Theater of Operations Electrical Systems (Jun 97)
5. MCO 3500.27B Operational Risk Management (ORM) (MAY 2004)
6. MCO P5090.2A Environmental Compliance and Protection Manual (Jul 98)
7. MCRP 4-11.1D Field Hygiene and Sanitation

8. MCRP 4-11B Environmental Considerations in Military Operations (Jun 00)
9. MCRP 5-12.1C Risk Management (Feb 01)
10. MCRP 5-2A Operational Terms and Graphics
11. MCWP 3-17 Engineer Operations
12. MCWP 4-11.4 Maintenance Operations
13. MCWP 4-11.6 Petroleum and Water Logistics Operations
14. MCWP 5-1 Marine Corps Planning Process
15. NAVMC DIR 3000.18 Marine Corps Force Deployment Planning and Execution Process Manual
16. NAVMC DIR 5100.8 Marine Corps Occupational Safety and Health (OSH) Program Manual (May 06)
17. NAVMED P-5010-5 Manual of Preventive Medicine, Chapter 5, Water Supply Ashore (Nov 90)
18. NAVMED P-5010-9 PMA Ground Ground Forces, 1991
19. TB MED 577 Occupational and Environmental Health Sanitary Control and Surveillance of Field Water Supplies
20. TM 11275-15/3D Principal Technical Characteristics of U.S. Marine Corps Engineer Equipment (May 02)
21. UNIT T/O&E Unit's Table of Organization and Equipment

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**1120-XENG-2502:** Conduct utilities site survey

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Utilities Officer

**GRADES:** WO-1, CWO-2, CWO-3, CWO-4, CWO-5

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Given a mission, map, warning order, grid coordinates, compass, personnel, blank Water Reconnaissance Reports (DA 1712R), and references.

**STANDARD:** To ensure essential elements of information is obtained that supports mission planning, commander's intent, and references.

**PERFORMANCE STEPS:**
1. Review map, warning order, and references.
2. Brief personnel.
3. Conduct survey.
4. Evaluate site for safety concerns.
5. Evaluate site for environmental concerns.
6. Ensure site conditions are evaluated and recorded on Water Reconnaissance Reports (DA 1712R).
7. Evaluate alternate water sources.
8. Evaluate site for camouflage, concealment, and decoys.
9. Evaluate site for Rear Area Security concerns.
10. Develop Site Survey report.
11. Brief Site Survey to those concerned.
12. Provide input for camp layout.
13. Provide input for engineer portions of operation orders.

**PREREQUISITE EVENTS:**
1169-XENG-2502 1120-XENG-2501

**REFERENCES:**
1. FM 10-52 Water Supply in Theaters of Operation
2. FM 10-52-1 Water Supply Point Equipment and Operations
3. FM 20-3 Camouflage
4. FM 5-424 Theater of Operations Electrical Systems (Jun 97)
5. FM 5-553 General Drafting
6. MCRP 3-17B Engineer Forms and Reports
7. MCRP 4-11.1D Field Hygiene and Sanitation
8. MCRP 4-11B Environmental Considerations in Military Operations (Jun 00)
9. MCWP 3-17.4 Engineer Reconnaissance
10. MCWP 3-41.1 Rear Area Operations
11. MCWP 4-1 Logistics Operations
12. MCWP 4-11 Tactical Level Logistics
13. MCWP 4-11.6 Petroleum and Water Logistics Operations
14. MCWP 5-1 Marine Corps Planning Process

**MISCELLANEOUS:**

**ADMINISTRATIVE INSTRUCTIONS:** Initial training for this event is received in the Utilities Chief course (CID: M0311E2).

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**1120-XENG-2503:** Conduct a Disaster Relief/Humanitarian Assistance (DR/HA) assessment

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Utilities Officer

**GRADES:** WO-1, CWO-2, CWO-3, CWO-4, CWO-5

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Given commander's intent, available intelligence reports/surveys and references.

**STANDARD:** To ensure essential elements of information is obtained that supports mission planning, commander's intent, and references.

**PERFORMANCE STEPS:**
1. Review demographics (people, infrastructure, security).
2. Develop Pre-Deployment Site Survey (PDSS) checklist.
3. Assess potable water requirements.
4. Identify water sources.
5. Assess hygiene requirements.
6. Determine electrical power requirements.

**RELATED EVENTS:** 1120-XENG-2501

**REFERENCES:**
1. DODD 2205.2 Humanitarian and Civic Assistance (HCA) Provided in Conjunction with Military Operations (Oct 94)
2. DODD 5100.46 Foreign Disaster Relief (Dec 75)
3. DODI 2205.3 Implementing Procedures for the Humanitarian and Civic Assistance (HCA) Program (Jan 95)

4. FM 10-52 Water Supply in Theaters of Operation
5. FM 10-52-1 Water Supply Point Equipment and Operations
6. FM 3-34.471 Plumbing, Pipefitting, and Sewerage
7. FM 5-424 Theater of Operations Electrical Systems (Jun 97)
8. MCO 3500.27B Operational Risk Management (ORM) (MAY 2004)
9. MCO P5090.2A Environmental Compliance and Protection Manual (Jul 98)
10. MCRP 4-11.1D Field Hygiene and Sanitation
11. MCRP 4-11B Environmental Considerations in Military Operations (Jun 00)
12. MCRP 5-12.1C Risk Management (Feb 01)
13. MCWP 3-33.1 MAGTF Civil Military Operations
14. MCWP 3-33.4 Domestic Support Operations
15. MCWP 4-11.6 Petroleum and Water Logistics Operations
16. MCWP 5-1 Marine Corps Planning Process
17. NAVMC DIR 3000.18 Marine Corps Force Deployment Planning and Execution Process Manual
18. NAVMC DIR 5100.8 Marine Corps Occupational Safety and Health (OSH) Program Manual (May 06)
19. NAVMED P-5010-5 Manual of Preventive Medicine, Chapter 5, Water Supply Ashore (Nov 90)
20. NAVMED P-5010-9 PMA Ground Ground Forces, 1991
21. TB MED 577 Occupational and Environmental Health Sanitary Control and Surveillance of Field Water Supplies
22. TB MED 593 Guidelines for Field Waste Management
23. TM 11275-15/3D Principal Technical Characteristics of U.S. Marine Corps Engineer Equipment (May 02)
24. UNIT T/O&E Unit's Table of Organization and Equipment
25. USAID FOG U.S. Agency for International Development (USAID) Field Operations Guide (FOG) for Disaster Assessment and Response - Version 4.0 (Sep 05)

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**1120-XENG-2521:** Plan a field electrical power generation/distribution system

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**DESCRIPTION:** The Utilities Officer is responsible for developing a support plan that encompasses supplying electrical power generation. A distribution plan is graphically depicted on a drawn schematic over camp layout(s) as a potential Course of Action (COA). The utilities Officer also provides input into Annex D of the Operation Order.

**BILLETS:** Utilities Officer

**GRADES:** WO-1, CWO-2, CWO-3, CWO-4, CWO-5

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Given a warning order requiring a base camp(s), area map(s), area reconnaissance report(s), any environmental impact report(s), camp layout(s) and references.

**STANDARD:** To ensure proper utilities planning factors support the commander's intent and mission requirements, per the references.

**PERFORMANCE STEPS:**

1. Review warning order, map(s), reconnaissance report(s), camp layout(s), and references.
2. Identify equipment/personnel requiring electrical support.
3. Determine electrical power generation/distribution equipment requirements, selecting equipment sites.
4. Determine environmental impacts.
5. Plot generation sites on camp layout(s), making provision for traffic.
6. Identify potential impact of weather/climate on electrical power generation/distribution operations.
7. Determine risks, conducting operational risk assessments.
8. Identify off limit areas (i.e., generator sites, hazardous material sites, etc.).
9. Determine number and type of warning signs required.
10. Schedule Preventive Maintenance Checks and Services (PMCS).
11. Determine POL requirements.
12. Determine camouflage, concealment, and decoy requirements.
13. Determine security requirements.
14. Estimate man-hour requirements, determining number of electricians required to support the mission.
15. Establish operator schedules.
16. Estimate logistical support (truck, forklift, etc.) required.
17. Establish Bill of Materials (BOM) including security, camouflage, environmental, and safety items.
18. Generate work request(s) for any required construction.
19. Establish a Course of Action (COA).
20. Record requirements for input into Annex D of the Operation Order.
21. Brief electrical support plan (if required).

**PREREQUISITE EVENTS:**

1169-XENG-2521 1120-ADMN-2001

**REFERENCES:**

1. FM 20-3 Camouflage
2. FM 5-424 Theater of Operations Electrical Systems (Jun 97)
3. MCRP 3-17B Engineer Forms and Reports
4. MCRP 4-11B Environmental Considerations in Military Operations (Jun 00)
5. MCWP 3-17 Engineer Operations
6. MCWP 3-17.4 Engineer Reconnaissance
7. MCWP 3-35.6 Desert Operations
8. MCWP 3-41.1 Rear Area Operations
9. MCWP 4-11 Tactical Level Logistics
10. MCWP 4-11.5 SeaBee Operations in the MAGTF
11. MCWP 5-1 Marine Corps Planning Process
12. TC 3-34.489 The Soldier and the Environment
13. TM 12359A-OD/B Principal Technical Characteristics of Expeditionary Power Systems Equipment (Aug 2008)
14. Appropriate Technical Manuals

**SUPPORT REQUIREMENTS:**

**MATERIAL:**

- Area topographical map(s)
- Electric Smartcards (Figure C-4 of MCWP 3-17.4)
- Area reconnaissance report(s)

**BILLETS:** Utilities Officer

**GRADES:** WO-1, CWO-2, CWO-3, CWO-4, CWO-5

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Given an Operation Order, site survey, camp layout, and references.

**STANDARD:** To ensure proper utilities planning factors support the commander's intent and mission requirements, per the references.

**PERFORMANCE STEPS:**
1. Review Operation Order, site survey, and camp layout.
2. Determine safety requirements.
3. Determine environmental requirements.
4. Develop camp layout of refrigeration/air conditioning equipment.
5. Design a plan for the installation and operation of field refrigeration/air conditioning equipment.
6. Determine logistical/materiel requirements.
7. Analyze plan for changes.
8. Draw plan over camp layout.
9. Brief plan to those concerned.

**PREREQUISITE EVENTS:** 1169-XENG-2541

**REFERENCES:**
1. MCO 10110.34E USMC Food Service and Subsistence Program
2. NAVMED P-5010 Navy Sanitation
3. NAVSUP P-421 Navy Food Service SOP
4. TM 4120-15/1D Principal Technical Characteristics of US Marine Corps Military Standard Air Conditioners (Environmental Control Units (ECU)) with Supplemental Logistics Data (Jul 97)
5. TM 9406-15 Grounding Procedures for Electromagnetic Interference Control and Safety (Aug 91)

**MISCELLANEOUS:**

**ADMINISTRATIVE INSTRUCTIONS:** Initial training for this event is received in the Utilities Chief course (CID: M0311E2).

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**1120-XENG-2553:** Plan field water support

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**DESCRIPTION:** The Utilities Officer is responsible for developing a support plan that encompasses supplying potable water. A distribution plan is graphically depicted on a drawn schematic over camp layout(s) as a potential Course of Action (COA). The Utilities Officer also provides input into Appendix 2 to Annex D of the Operation Order.

**BILLETS:** Utilities Officer

**GRADES:** WO-1, CWO-2, CWO-3, CWO-4, CWO-5

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Given a warning order requiring a base camp(s), area map(s), area reconnaissance report(s), water reconnaissance report(s), any environmental impact report(s), camp layout(s) and references.

**STANDARD:** To ensure proper utilities planning factors support the commander's intent and mission requirements, per the references.

**PERFORMANCE STEPS:**

1. Review warning order, map(s), reconnaissance report(s), camp layout(s), and references.
2. Identify equipment/personnel requiring water support.
3. Determine water purification/storage/distribution equipment requirements, selecting equipment sites.
4. Determine environmental impacts.
5. Plot equipment sites on camp layout(s).
6. Select water point location(s) making provision for traffic and drainage.
7. Plot water point(s) on camp layout(s).
8. Plot distribution methods on camp layout(s).
9. Identify potential impact of weather/climate on water purification, storage, and distribution operations.
10. Determine risks, conducting operational risk assessments.
11. Identify off limit areas (i.e., generator sites, hazardous material sites, etc.).
12. Determine number and type of warning signs required.
13. Schedule Preventive Maintenance Checks and Services (PMCS).
14. Determine POL requirements.
15. Determine chemical requirements for purification/storage operations.
16. Determine camouflage, concealment, and decoy requirements.
17. Determine security requirements.
18. Estimate man-hour requirements, determining number of water support personnel required to support the mission.
19. Establish operator schedules.
20. Estimate logistical support (truck, forklift, etc.) required.
21. Establish Bill of Materials (BOM) including security, camouflage, environmental, and safety items.
22. Generate work request(s) for any required construction.
23. Establish a Course of Action (COA).
24. Record requirements for input into Appendix 2 to Annex D of the Operation Order (see Joint Pub 4-03).
25. Brief water support plan (if required).

**PREREQUISITE EVENTS:**

1169-XENG-2553 1120-ADMN-2001

**REFERENCES:**

1. FM 10-52 Water Supply in Theaters of Operation
2. FM 10-52-1 Water Supply Point Equipment and Operations
3. FM 20-3 Camouflage
4. Joint Pub 4-03 Joint Bulk Petroleum and Water Doctrine
5. MCRP 3-17B Engineer Forms and Reports
6. MCRP 4-11B Environmental Considerations in Military Operations (Jun 00)
7. MCWP 3-17 Engineer Operations
8. MCWP 3-17.4 Engineer Reconnaissance

9. MCWP 3-41.1 Rear Area Operations
10. MCWP 4-11 Tactical Level Logistics
11. MCWP 4-11.5 SeaBee Operations in the MAGTF
12. MCWP 4-11.6 Petroleum and Water Logistics Operations
13. MCWP 5-1 Marine Corps Planning Process
14. NAVMED P-5010-5 Manual of Preventive Medicine, Chapter 5, Water Supply Ashore (Nov 90)
15. TB MED 577 Occupational and Environmental Health Sanitary Control and Surveillance of Field Water Supplies
16. TC 3-34.489 The Soldier and the Environment
17. Appropriate Technical Manuals

**SUPPORT REQUIREMENTS:**

**MATERIAL:**
- Area topographical map(s)
- DA Form 1712-Rs (Water Reconnaissance Reports)
- Water Smartcards (Figure C-3 of MCWP 3-17.4)
- Area reconnaissance report(s)
- Environmental impact report(s) (if any)
- Camp layout(s)

**MISCELLANEOUS:**

**ADMINISTRATIVE INSTRUCTIONS:** Initial training for this event is received in the Utilities Chief course (CID: M0311E2).

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**1120-XENG-2555:** Plan field hygiene equipment support

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**DESCRIPTION:** The Utilities Officer is responsible for developing a support plan that encompasses providing hygiene support. A distribution plan is graphically depicted on a drawn schematic over camp layout(s) as a potential Course of Action (COA). The Utilities Officer also provides input into Appendix 6 to Annex Q of the Operation Order.

**BILLETS:** Utilities Officer

**GRADES:** WO-1, CWO-2, CWO-3, CWO-4, CWO-5

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Given a warning order requiring a base camp(s), map(s), reconnaissance report(s), camp layout(s) with water source and distribution points indicated, any environmental impact report(s), known soil type(s) and references.

**STANDARD:** To ensure proper utilities planning factors support the commander's intent and mission requirements, per the references.

**PERFORMANCE STEPS:**
1. Review warning order, map(s), reconnaissance report(s), camp layout(s), and references.

2. Identify personnel requiring hygiene support.
3. Determine hygiene equipment requirements, selecting equipment sites and making provisions for traffic and drainage.
4. Determine environmental impacts.
5. Plot equipment sites on camp layout(s).
6. Identify potential impact of weather/climate on hygiene equipment operations.
7. Determine risks, conducting operational risk assessments.
8. Identify off limit areas (i.e., generator sites, hazardous material sites, etc.).
9. Determine number and type of warning sign(s) required.
10. Schedule Preventive Maintenance Checks and Services (PMCS).
11. Determine POL requirements.
12. Determine chemical requirements for hygiene operations.
13. Determine camouflage, concealment, and decoy requirements.
14. Determine security requirements.
15. Determine laundry/shower schedules for supported units.
16. Estimate man-hour requirements, determining number of water support personnel required to support hygiene mission.
17. Establish operator schedules.
18. Estimate logistical support (truck, forklift, etc.) required.
19. Establish a Bill of Materials (BOM) including security, camouflage, environmental, and safety items.
20. Generate work request(s) for any required construction.
21. Establish a Course of Action (COA).
22. Record requirements for input into Annex D and Appendix 6 to Annex Q of the Operation Order.
23. Brief hygiene equipment support plan (if required).

**PREREQUISITE EVENTS:**

1120-ADMN-2001 1169-XENG-2555 1120-XENG-2553

**REFERENCES:**

1. FM 20-3 Camouflage
2. FM 3-34.471 Plumbing, Pipefitting, and Sewerage
3. MCRP 3-17B Engineer Forms and Reports
4. MCRP 4-11.1D Field Hygiene and Sanitation
5. MCRP 4-11B Environmental Considerations in Military Operations (Jun 00)
6. MCWP 3-17 Engineer Operations
7. MCWP 5-1 Marine Corps Planning Process
8. NAVMED P-5010-9 PMA Ground Ground Forces, 1991
9. TB MED 577 Occupational and Environmental Health Sanitary Control and Surveillance of Field Water Supplies
10. TC 3-34.489 The Soldier and the Environment
11. Appropriate Technical Manuals

**SUPPORT REQUIREMENTS:**

**MATERIAL:**

- Area topographical map(s)
- Reconnaissance report(s)
- Environmental impact report(s) (if any)
- Camp layout(s) with water source and distribution points indicated

**MISCELLANEOUS:**

**ADMINISTRATIVE INSTRUCTIONS:** Initial training for this event is received in the Utilities Chief course (CID: M0311E2).

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**1120-XENG-2558:** Plan a field sanitation system

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**DESCRIPTION:** The Utilities Officer is responsible for developing a support plan that encompasses supplying potable water. A distribution plan is graphically depicted on a drawn schematic over camp layout(s) as a potential Course of Action (COA). The Utilities Officer also provides input into Appendix 6 to Annex Q and Annex D of the Operation Order.

**BILLETS:** Utilities Officer

**GRADES:** WO-1, CWO-2, CWO-3, CWO-4, CWO-5

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Given a warning order requiring a base camp(s), map(s), reconnaissance report(s), camp layout(s), any environmental impact report(s), known soil type(s) and references.

**STANDARD:** To ensure proper utilities planning factors support the commander's intent and mission requirements, per the references.

**PERFORMANCE STEPS:**

1. Review warning order, map(s), reconnaissance report(s), camp layout(s), and references.
2. Identify locations of equipment, devices and facilities to be supported/impacted by sanitation requirements.
3. Determine soil absorption rates.
4. Identify potential impact of weather/climate on sanitation devices.
5. Determine amount of waste water that will be generated.
6. Determine numbers of sanitation devices/facilities (grease traps, head/latrines, garbage pits, and soakage pits) required.
7. Determine environmental impacts.
8. Plot sanitation devices/facilities on camp layout(s), making provisions for traffic.
9. Determine risks, conducting operational risk assessments.
10. Determine number and type of warning signs required.
11. Determine camouflage, concealment, and decoy requirements.
12. Estimate man-hour requirements, determining number of water support personnel required to support sanitation mission.
13. Determine cleaning/inspection/maintenance schedule.
14. Estimate logistical support (truck, forklift, etc.) required.
15. Establish a Bill of Materials (BOM) including camouflage, environmental, and safety items.
16. Generate work request(s) for any required construction.
17. Establish a Course of Action (COA).

- Environmental impact report(s) (if any)
- Camp layout(s)

**MISCELLANEOUS:**

**ADMINISTRATIVE INSTRUCTIONS:** Initial training for this event is received in the Utilities Chief course (CID: M0311E2).

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**1120-XENG-2522:** Design an electrical distribution panel (Buss bar)

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Utilities Officer

**GRADES:** WO-1, CWO-2, CWO-3, CWO-4, CWO-5

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Given a known requirement for uninterrupted electrical power and the references.

**STANDARD:** To ensure fabricated structure safely achieves the desired effect in support of the commander's intent and mission requirements, per the references.

**PERFORMANCE STEPS:**
1. Determine maximum amperage of electrical distribution grid.
2. Determine size of conductors.
3. Determine size of over current protection.
4. Determine bonding and grounding requirements.
5. Determine remaining construction and electrical materials required.
6. Draw Buss bar design.
7. Establish a Bill of Materials (BOM).

**PREREQUISITE EVENTS:** 1169-XENG-2522

**REFERENCES:**
1. FM 5-424 Theater of Operations Electrical Systems (Jun 97)

**MISCELLANEOUS:**

**ADMINISTRATIVE INSTRUCTIONS:** Initial training for this event is received in the Utilities Chief course (CID: M0311E2).

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**1120-XENG-2541:** Plan field refrigeration/air conditioning equipment support

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**DESCRIPTION:** The Utilities Officer is responsible for developing a support plan that encompasses supplying refrigeration and air conditioning support. A distribution plan is graphically depicted on a drawn schematic over camp layout(s) as a potential Course of Action (COA).

18. Record requirements for input into Annex D and Appendix 6 to Annex Q of the Operation Order.
19. Brief sanitation plan (if required).

**PREREQUISITE EVENTS:**
1120-ADMN-2001 1120-XENG-2555 1120-XENG-2553
1169-XENG-2558

**REFERENCES:**
1. FM 20-3 Camouflage
2. FM 3-34.471 Plumbing, Pipefitting, and Sewerage
3. FM 4-25.12 Unit Field Sanitation Team
4. MCRP 3-17B Engineer Forms and Reports
5. MCRP 4-11.1D Field Hygiene and Sanitation
6. MCRP 4-11B Environmental Considerations in Military Operations (Jun 00)
7. MCWP 3-17 Engineer Operations
8. MCWP 5-1 Marine Corps Planning Process
9. NAVMED P-5010-9 PMA Ground Ground Forces, 1991
10. TB MED 593 Guidelines for Field Waste Management
11. TC 3-34.489 The Soldier and the Environment
12. Appropriate Technical Manuals

**SUPPORT REQUIREMENTS:**

**MATERIAL:**
- Area topographical map(s)
- Reconnaissance report(s)
- Environmental impact report(s) (if any)
- Camp layout(s) with equipment, devices and facilities indicated

**MISCELLANEOUS:**

**ADMINISTRATIVE INSTRUCTIONS:** Initial training for this event is received in the Utilities Chief course (CID: M0311E2).

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**1120-XENG-2561:** Plan an interior electrical wiring system

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Utilities Officer

**GRADES:** WO-1, CWO-2, CWO-3, CWO-4, CWO-5

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Provided construction plans for a building, a list of electrical fixtures/appliances to be installed, local code requirements, and references.

**STANDARD:** To ensure proper utilities planning factors support mission requirements, per the references.

**PERFORMANCE STEPS:**
1. Review construction plans, local code, and references.
2. Review list of electrical fixtures/appliances to be installed.

3. Calculate general lighting load.
4. Identify power requirements.
5. Determine code requirements.
6. Size branch circuits.
7. Size over current protection devices.
8. Plot electrical symbols on construction plans.
9. Ensure interior electrical wiring system plan conforms to references and the building's requirements.
10. Establish a Bill of Materials (BOM), including safety items.
11. Establish a Course of Action (COA).

**PREREQUISITE EVENTS:**
1169-XENG-2561 1120-ADMN-2001

**RELATED EVENTS:**
1120-XENG-2962 1120-XENG-2961

**REFERENCES:**
1. FM 5-424 Theater of Operations Electrical Systems (Jun 97)
2. FM 5-553 General Drafting
3. NEC (NFPA 70) National Electrical Code - by National Fire Protection Association
4. TM 5-704 Construction Print Reading in the Field

**SUPPORT REQUIREMENTS:**

**MATERIAL:** Construction plans.

**MISCELLANEOUS:**

**ADMINISTRATIVE INSTRUCTIONS:** Initial training for this event is received in the Utilities Chief course (CID: M0311E2).

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**1120-XENG-2571:** Plan an interior heating, ventilation and air conditioning (HVAC) system

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Utilities Officer

**GRADES:** WO-1, CWO-2, CWO-3, CWO-4, CWO-5

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Provided construction plans for a building, a list of heating, ventilation and air conditioning criteria for the building, local code requirements, and references.

**STANDARD:** To ensure proper utilities planning factors support mission requirements, per the references.

**PERFORMANCE STEPS:**
1. Review construction plans, local code, and references.
2. Review HVAC criteria.

3. Calculate volume of air to be conditioned.
4. Determine insulation characteristics.
5. Identify tons of air to be conditioned per hour.
6. Determine code requirements.
7. Determine vent and ducting requirements.
8. Plot HVAC system on construction plans.
9. Ensure HVAC system plan conforms to references and building's requirements.
10. Determine number of personnel required to install system.
11. Establish a Bill of Materials (BOM), including safety items.
12. Establish a Course of Action (COA).

**PREREQUISITE EVENTS:** 1169-XENG-2571

**REFERENCES:**
1. FM 5-553 General Drafting
2. TM 5-704 Construction Print Reading in the Field
3. TM 9406-15 Grounding Procedures for Electromagnetic Interference Control and Safety (Aug 91)
4. National Electrical Code

**MISCELLANEOUS:**

**ADMINISTRATIVE INSTRUCTIONS:** Initial training for this event is received in the Utilities Chief course (CID: M0311E2).

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**1120-XENG-2581:** Plan an interior plumbing system

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Utilities Officer

**GRADES:** WO-1, CWO-2, CWO-3, CWO-4, CWO-5

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Provided construction plans for a building, a list of plumbing fixtures to be installed, local code requirements, and references.

**STANDARD:** To ensure proper utilities planning factors support mission requirements, per the references.

**PERFORMANCE STEPS:**
1. Review construction plans, local code, and references.
2. Review list of plumbing fixtures/appliances to be installed.
3. Identify plumbing symbols.
4. Determine code requirements.
5. Identify water supply requirements.
6. Identify sanitary drainage requirements.
7. Identify vent requirements.
8. Plot plumbing system/fixtures on construction plans.
9. Estimate man-hour requirements.
10. Determine risks, conducting operational risk assessments.

11. Establish a Bill of Materials (BOM), including safety items.
12. Establish a Course of Action (COA).

**PREREQUISITE EVENTS:**
1169-XENG-2581 1120-ADMN-2001

**RELATED EVENTS:**
1120-XENG-2988 1120-XENG-2987

**REFERENCES:**
1. FM 3-34.471 Plumbing, Pipefitting, and Sewerage
2. FM 5-553 General Drafting
3. TM 5-704 Construction Print Reading in the Field
4. UPC (IAPMO/ANSI) Uniform Plumbing Code - by International Association of Plumbing and Mechanical Officials/American National Standard Institute

**SUPPORT REQUIREMENTS:**

**MATERIAL:** Construction plans.

**MISCELLANEOUS:**

**ADMINISTRATIVE INSTRUCTIONS:** Initial training for this event is received in the Utilities Chief course (CID: M0311E2).

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**1120-XENG-2621:** Manage field electrical power generation/distribution system installation

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Utilities Officer

**GRADES:** WO-1, CWO-2, CWO-3, CWO-4, CWO-5

**INITIAL TRAINING SETTING:** MOJT

**CONDITION:** Given an Operation Order, camp layout, equipment, personnel, and references.

**STANDARD:** To ensure required utilities services are established, resulting in effective service support to the unit, per the references.

**PERFORMANCE STEPS:**
1. Review Operation Order and camp layout.
2. Review safety requirements.
3. Review environmental requirements.
4. Brief installation crew.
5. Monitor electrical power generation/distribution system installation.
6. Inspect installed field electrical power generation/distribution system.

**PREREQUISITE EVENTS:** 1120-XENG-2522

**REFERENCES:**
1. FM 5-422 Engineer Prime Power Operations

2. FM 5-424 Theater of Operations Electrical Systems (Jun 97)
3. TM 9406-15 Grounding Procedures for Electromagnetic Interference Control and Safety (Aug 91)

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**1120-XENG-2622:** Validate ground test set measurements

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Utilities Officer

**GRADES:** WO-1, CWO-2, CWO-3, CWO-4, CWO-5

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Provided a ground test set and references.

**STANDARD:** To ensure safety of equipment and personnel per the references.

**PERFORMANCE STEPS:**
1. Review references.
2. Review test measurement reports.
3. Ensure measurements are within standards.

**PREREQUISITE EVENTS:** 1169-XENG-2622

**REFERENCES:**
1. 29 CFR 1910.269 Chapter 29, Code of Federal Regulations, Part Number 1910 (Occupational Safety and Health Standards), Standard Number 269 - Electrical Power Generation, Transmission, and Distribution
2. FM 5-424 Theater of Operations Electrical Systems (Jun 97)
3. TC 11-6 Grounding Techniques (Mar 89)
4. TM 5-690 Grounding and Bonding in Command, Control, Communications, Computer, Intelligence, Surveillance, and Reconnaissance (C4ISR) Facilities (Feb 02)
5. TM 9406-15 Grounding Procedures for Electromagnetic Interference Control and Safety (Aug 91)

**MISCELLANEOUS:**

**ADMINISTRATIVE INSTRUCTIONS:** Initial training for this event is received in the Utilities Chief course (CID: M0311E2).

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**1120-XENG-2641:** Manage field refrigeration/air conditioning equipment installation

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Utilities Officer

**GRADES:** WO-1, CWO-2, CWO-3, CWO-4, CWO-5

**INITIAL TRAINING SETTING:** MOJT

**CONDITION:** Given an Operation Order, camp layout, equipment, personnel, and references.

**STANDARD:** To ensure required utilities services are established, resulting in effective service support to the unit, per the references.

**PERFORMANCE STEPS:**
1. Review Operation Order and camp layout.
2. Review safety requirements.
3. Review environmental requirements.
4. Brief installation crew.
5. Monitor field refrigeration/air conditioning equipment installation.
6. Inspect installed field refrigeration/air conditioning equipment.
7. Ensure inspection of installed equipment by preventive medicine personnel.

**PREREQUISITE EVENTS:** 1120-XENG-2541

**REFERENCES:**
1. MCO 10110.34E USMC Food Service and Subsistence Program
2. NAVMED P-5010 Navy Sanitation
3. NAVSUP P-421 Navy Food Service SOP
4. TM 4120-15/1D Principal Technical Characteristics of US Marine Corps Military Standard Air Conditioners (Environmental Control Units (ECU)) with Supplemental Logistics Data (Jul 97)
5. TM 9406-15 Grounding Procedures for Electromagnetic Interference Control and Safety (Aug 91)

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**1120-XENG-2652:** Validate water test equipment measurements

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Utilities Officer

**GRADES:** WO-1, CWO-2, CWO-3, CWO-4, CWO-5

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Provided water test equipment and references.

**STANDARD:** To ensure potable water quality is maintained for unit life support requirements per the references.

**PERFORMANCE STEPS:**
1. Review references.
2. Review test measurement reports.
3. Ensure measurements are within standards.

**PREREQUISITE EVENTS:** 1169-XENG-2652

**REFERENCES:**
1. FM 10-52 Water Supply in Theaters of Operation
2. FM 10-52-1 Water Supply Point Equipment and Operations
3. MCWP 4-11.6 Petroleum and Water Logistics Operations
4. TB MED 577 Occupational and Environmental Health Sanitary Control and

Surveillance of Field Water Supplies
5. TM 10-6630-222-12&P Water Quality Analysis Set-Purification

**MISCELLANEOUS:**

**ADMINISTRATIVE INSTRUCTIONS:** Initial training for this event is received in the Utilities Chief course (CID: M0311E2).

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**1120-XENG-2653:** Manage field water purification/storage/distribution system installation

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Utilities Officer

**GRADES:** WO-1, CWO-2, CWO-3, CWO-4, CWO-5

**INITIAL TRAINING SETTING:** MOJT

**CONDITION:** Given an Operation Order, completed Water Reconnaissance Reports (DA-1712R), camp layout, equipment, personnel, and references.

**STANDARD:** To ensure required utilities services are established, resulting in effective service support to the unit, per the references.

**PERFORMANCE STEPS:**
1. Review Operation Order, Water Reconnaissance Report, and camp layout.
2. Review safety requirements.
3. Review environmental requirements.
4. Brief installation crew.
5. Manage the field water purification/storage/distribution system installation.
6. Inspect installed field water purification/storage/distribution system.
7. Ensure inspection of installed system by preventive medicine personnel.

**REFERENCES:**
1. FM 10-52 Water Supply in Theaters of Operation
2. FM 10-52-1 Water Supply Point Equipment and Operations
3. Joint Pub 4-03 Joint Bulk Petroleum and Water Doctrine
4. MCWP 4-11.6 Petroleum and Water Logistics Operations
5. TM 9406-15 Grounding Procedures for Electromagnetic Interference Control and Safety (Aug 91)
6. Appropriate Technical Manuals

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**1120-XENG-2655:** Manage field hygiene equipment installation

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Utilities Officer

**GRADES:** WO-1, CWO-2, CWO-3, CWO-4, CWO-5

**INITIAL TRAINING SETTING:** MOJT

**CONDITION:** Given an Operation Order, camp layout, equipment, personnel, and references.

**STANDARD:** To ensure required utilities services are established, resulting in effective service support to the unit, per the references.

**PERFORMANCE STEPS:**
1. Review Operation Order and camp layout.
2. Review safety requirements.
3. Review environmental requirements.
4. Brief installation crew.
5. Monitor field hygiene equipment installation.
6. Inspect installed field hygiene equipment.
7. Ensure inspection of installed equipment by preventive medicine personnel.

**REFERENCES:**
1. FM 21-10 Field Hygiene and Sanitation
2. FM 21-10-1 Unit Field Sanitation
3. FM 3-34.471 Plumbing, Pipefitting, and Sewerage
4. NAVMED P-5010 Navy Sanitation
5. TM 9406-15 Grounding Procedures for Electromagnetic Interference Control and Safety (Aug 91)

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**1120-XENG-2658:** Manage camp sanitation system installation

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Utilities Officer

**GRADES:** WO-1, CWO-2, CWO-3, CWO-4, CWO-5

**INITIAL TRAINING SETTING:** MOJT

**CONDITION:** Given an Operation Order, environmental impact report, area map, camp layout, equipment, personnel, and references.

**STANDARD:** To ensure required utilities services are established, resulting in effective service support to the unit, per the references.

**PERFORMANCE STEPS:**
1. Review Operation Order, environmental impact report, and camp layout.
2. Review safety requirements.
3. Review environmental requirements.
4. Brief installation crew.
5. Manage installation of sanitation system components.
6. Inspect installed sanitation system.
7. Ensure inspection of installed system by preventive medicine personnel.

**REFERENCES:**
1. FM 21-10 Field Hygiene and Sanitation
2. FM 21-10-1 Unit Field Sanitation
3. FM 3-34.471 Plumbing, Pipefitting, and Sewerage
4. NAVMED P-5010 Navy Sanitation

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**1120-XENG-2721:** Manage field electrical power generation/distribution system operation

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Utilities Officer

**GRADES:** WO-1, CWO-2, CWO-3, CWO-4, CWO-5

**INITIAL TRAINING SETTING:** MOJT

**CONDITION:** Given an Operation order, camp layout, electrical power generation/distribution system, operators, and references.

**STANDARD:** To ensure required utilities services are maintained, resulting in effective service support to the unit, per the references.

**PERFORMANCE STEPS:**
1. Review Operation order and camp layout.
2. Inspect installed electrical power generation/distribution system.
3. Review safety concerns.
4. Review environmental concerns.
5. Establish operator schedule.
6. Brief personnel.
7. Monitor operation of generator sets.
8. Monitor operation of floodlight sets.
9. Monitor operation of dummy loads.
10. Monitor electrical distribution system.
11. Ensure electrical loads are balanced.
12. Manage electrical power generation/distribution system operator maintenance.
13. Ensure records/reports are updated/completed.

**PREREQUISITE EVENTS:**
1120-XENG-2522 1120-XENG-2622 1120-XENG-2621

**REFERENCES:**
1. FM 5-424 Theater of Operations Electrical Systems (Jun 97)
2. TM 4700-15/1H Ground Equipment Record Procedures
3. TM 9406-15 Grounding Procedures for Electromagnetic Interference Control and Safety (Aug 91)
4. UNIT SOP Unit's Standing Operating Procedures

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**1120-XENG-2741:** Manage field refrigeration/air conditioning equipment operation

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Utilities Officer

**GRADES:** WO-1, CWO-2, CWO-3, CWO-4, CWO-5

**INITIAL TRAINING SETTING:** MOJT

**CONDITION:** Given an Operation Order, camp layout, refrigeration/air conditioning equipment, operators, and references.

**STANDARD:** To ensure required utilities services are maintained, resulting in effective service support to the unit, per the references.

**PERFORMANCE STEPS:**
1. Review Operation Order and camp layout.
2. Inspect installed refrigeration/air conditioning equipment.
3. Review safety concerns.
4. Review environmental concerns.
5. Establish operator schedule.
6. Brief personnel.
7. Monitor operation of air conditioning equipment.
8. Monitor operation of ice cream plants.
9. Monitor operation of ice making machines.
10. Monitor operation of refrigeration units.
11. Manage refrigeration/air conditioning equipment operator maintenance.
12. Ensure records/reports are updated/completed.

**PREREQUISITE EVENTS:**
1120-XENG-2971 1120-XENG-2571

**REFERENCES:**
1. MCO 10110.34E USMC Food Service and Subsistence Program
2. NAVMED P-5010 Navy Sanitation
3. NAVSUP P-421 Navy Food Service SOP
4. TM 4120-15/1D Principal Technical Characteristics of US Marine Corps Military Standard Air Conditioners (Environmental Control Units (ECU)) with Supplemental Logistics Data (Jul 97)
5. TM 4700-15/1H Ground Equipment Record Procedures
6. TM 9406-15 Grounding Procedures for Electromagnetic Interference Control and Safety (Aug 91)
7. UNIT SOP Unit's Standing Operating Procedures

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**1120-XENG-2753:** Manage field water purification/storage/distribution system operation

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Utilities Officer

**GRADES:** WO-1, CWO-2, CWO-3, CWO-4, CWO-5

**INITIAL TRAINING SETTING:** MOJT

**CONDITION:** Given an Operation Order, completed Water Reconnaissance Reports (DA-1712R), camp layout, water purification/storage/distribution system, operators, and references.

**STANDARD:** To ensure required utilities services are maintained, resulting in effective service support to the unit, per the references.

**PERFORMANCE STEPS:**
1. Review Operation Order, Water Reconnaissance Reports, and camp layout.
2. Inspect installed water purification/storage/distribution system.
3. Review safety concerns.
4. Review environmental concerns.
5. Establish operator schedule.
6. Brief personnel.
7. Monitor operation of water purification/storage/distribution system.
8. Monitor operation of water purification equipment.
9. Monitor operation of forward area water point supply systems.
10. Monitor operation of SIXCON module systems.
11. Monitor operation of water pump assemblies.
12. Monitor operation of water chillers.
13. Monitor use of collapsible tanks and bladders.
14. Ensure water quantity and quality meet requirements.
15. Ensure all water production reports and logs are completed and submitted.
16. Manage water purification/storage/distribution equipment operator maintenance.
17. Ensure records/reports are updated/completed.

**PREREQUISITE EVENTS:**
1120-XENG-2652 1120-XENG-2653

**REFERENCES:**
1. FM 10-52 Water Supply in Theaters of Operation
2. FM 10-52-1 Water Supply Point Equipment and Operations
3. MCWP 4-11.6 Petroleum and Water Logistics Operations
4. TM 4700-15/1H Ground Equipment Record Procedures (Jul 95)

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**1120-XENG-2755:** Manage field hygiene equipment operation

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Utilities Officer

**GRADES:** WO-1, CWO-2, CWO-3, CWO-4, CWO-5

**INITIAL TRAINING SETTING:** MOJT

**CONDITION:** Given an Operation Order, camp layout, hygiene equipment, operators, and references.

**STANDARD:** To ensure required utilities services are maintained, resulting in effective service support to the unit, per the references.

**PERFORMANCE STEPS:**
1. Review Operation Order and camp layout.
2. Inspect installed hygiene equipment.
3. Review safety concerns.
4. Review environmental concerns.
5. Establish operator schedule.
6. Brief personnel.
7. Monitor operation of bare base laundry facilities.
8. Monitor operation of bare base shower facilities.

9. Monitor operation of water heaters.
10. Ensure drainage system is functioning properly.
11. Ensure that daily sanitation standards are met.
12. Manage hygiene equipment operator maintenance.
13. Ensure records/reports are updated/completed.

**PREREQUISITE EVENTS:**
1120-XENG-2655 1120-XENG-2658

**REFERENCES:**
1. FM 21-10 Field Hygiene and Sanitation
2. FM 21-10-1 Unit Field Sanitation
3. FM 3-34.471 Plumbing, Pipefitting, and Sewerage
4. NAVMED P-5010 Navy Sanitation
5. TM 4700-15/1H Ground Equipment Record Procedures
6. TM 9406-15 Grounding Procedures for Electromagnetic Interference Control and Safety (Aug 91)
7. UNIT SOP Unit's Standing Operating Procedures

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**1120-XENG-2758:** Manage camp sanitation system operation

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Utilities Officer

**GRADES:** WO-1, CWO-2, CWO-3, CWO-4, CWO-5

**INITIAL TRAINING SETTING:** MOJT

**CONDITION:** Given an Operation Order, camp layout, camp sanitation system, personnel, and references.

**STANDARD:** To ensure required utilities services are maintained, resulting in effective service support to the unit, per the references.

**PERFORMANCE STEPS:**
1. Review Operation Order and camp layout.
2. Inspect components of camp sanitation system.
3. Review safety concerns.
4. Review environmental concerns.
5. Coordinate with Preventive Medicine.
6. Monitor operation of camp sanitation system.
7. Identify components needing cleaning/repair/closure.
8. Brief personnel.
9. Monitor system maintenance.

**PREREQUISITE EVENTS:**
1120-XENG-2655 1120-XENG-2658

**REFERENCES:**
1. FM 21-10 Field Hygiene and Sanitation
2. FM 21-10-1 Unit Field Sanitation
3. FM 3-34.471 Plumbing, Pipefitting, and Sewerage

4. NAVMED P-5010 Navy Sanitation
5. UNIT SOP Unit's Standing Operating Procedures

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**1120-XENG-2821**: Manage field electrical power generation/distribution system recovery

**EVALUATION-CODED**: NO **SUSTAINMENT INTERVAL**: 12 months

**BILLETS**: Utilities Officer

**GRADES**: WO-1, CWO-2, CWO-3, CWO-4, CWO-5

**INITIAL TRAINING SETTING**: MOJT

**CONDITION**: Given an Operation Order, camp layout, equipment, personnel, and references.

**STANDARD**: To ensure required utilities services are retrograded, resulting in effective completion of service support to the unit, per the references.

**PERFORMANCE STEPS**:
1. Review Operation Order and camp layout.
2. Review safety requirements.
3. Review environmental requirements.
4. Inspect installed field electrical power generation/distribution system.
5. Brief recovery crew.
6. Ensure electrical power generation/distribution system recovery.

**PREREQUISITE EVENTS**:
1120-XENG-2621 1120-XENG-2522

**REFERENCES**:
1. FM 5-422 Engineer Prime Power Operations
2. FM 5-424 Theater of Operations Electrical Systems (Jun 97)
3. TM 9406-15 Grounding Procedures for Electromagnetic Interference Control and Safety (Aug 91)

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**1120-XENG-2841**: Manage field refrigeration/air conditioning equipment recovery

**EVALUATION-CODED**: NO **SUSTAINMENT INTERVAL**: 12 months

**BILLETS**: Utilities Officer

**GRADES**: WO-1, CWO-2, CWO-3, CWO-4, CWO-5

**INITIAL TRAINING SETTING**: MOJT

**CONDITION**: Given an Operation Order, camp layout, equipment, personnel, and references.

**STANDARD**: To ensure required utilities services are retrograded, resulting in effective completion of service support to the unit, per the references.

**PERFORMANCE STEPS:**
1. Review Operation Order and camp layout.
2. Review safety requirements.
3. Review environmental requirements.
4. Inspect installed field refrigeration/air conditioning equipment.
5. Brief recovery crew.
6. Ensure field refrigeration/air conditioning equipment recovery.

**PREREQUISITE EVENTS:**
1120-XENG-2641 1120-XENG-2541

**REFERENCES:**
1. MCO 10110.34E USMC Food Service and Subsistence Program
2. NAVMED P-5010 Navy Sanitation
3. NAVSUP P-421 Navy Food Service SOP
4. TM 4120-15/1D Principal Technical Characteristics of US Marine Corps Military Standard Air Conditioners (Environmental Control Units (ECU)) with Supplemental Logistics Data (Jul 97)
5. TM 9406-15 Grounding Procedures for Electromagnetic Interference Control and Safety (Aug 91)

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**1120-XENG-2853:** Manage field water purification/storage/distribution system recovery

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Utilities Officer

**GRADES:** WO-1, CWO-2, CWO-3, CWO-4, CWO-5

**INITIAL TRAINING SETTING:** MOJT

**CONDITION:** Given an Operation Order, completed Water Reconnaissance Reports (DA-1712R), camp layout, equipment, personnel, and references.

**STANDARD:** To ensure required utilities services are retrograded, resulting in effective completion of service support to the unit, per the references.

**PERFORMANCE STEPS:**
1. Review Operation Order, Water Reconnaissance Report, and camp layout.
2. Review safety requirements.
3. Review environmental requirements.
4. Inspect installed field water purification/storage/distribution system.
5. Brief recovery crew.
6. Ensure field water purification/storage/distribution system recovery.

**PREREQUISITE EVENTS:** 1120-XENG-2653

**REFERENCES:**
1. FM 10-52 Water Supply in Theaters of Operation
2. FM 10-52-1 Water Supply Point Equipment and Operations
3. MCWP 4-11.6 Petroleum and Water Logistics Operations

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**1120-XENG-2855:** Manage field hygiene equipment recovery

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Utilities Officer

**GRADES:** WO-1, CWO-2, CWO-3, CWO-4, CWO-5

**INITIAL TRAINING SETTING:** MOJT

**CONDITION:** Given an Operation Order, camp layout, equipment, personnel, and references.

**STANDARD:** To ensure required utilities services are retrograded, resulting in effective completion of service support to the unit, per the references.

**PERFORMANCE STEPS:**
1. Review Operation Order and camp layout.
2. Review safety requirements.
3. Review environmental requirements.
4. Inspect installed field hygiene equipment.
5. Brief recovery crew.
6. Ensure field hygiene equipment recovery.

**PREREQUISITE EVENTS:** 1120-XENG-2655

**REFERENCES:**
1. FM 21-10 Field Hygiene and Sanitation
2. FM 21-10-1 Unit Field Sanitation
3. FM 3-34.471 Plumbing, Pipefitting, and Sewerage
4. FM 5-163 Sewerage
5. NAVMED P-5010 Navy Sanitation
6. TM 9406-15 Grounding Procedures for Electromagnetic Interference Control and Safety (Aug 91)

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**1120-XENG-2858:** Manage camp sanitation system recovery/closure

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Utilities Officer

**GRADES:** WO-1, CWO-2, CWO-3, CWO-4, CWO-5

**INITIAL TRAINING SETTING:** MOJT

**CONDITION:** Given an Operation Order, environmental impact report, area map, camp layout, equipment, personnel, and references.

**STANDARD:** To ensure required utilities services are established, resulting in effective service support to the unit, per the references.

**PERFORMANCE STEPS:**
1. Review Operation Order, environmental impact report, and camp layout.
2. Review safety requirements.

3. Review environmental requirements.
4. Inspect sanitation system.
5. Brief recovery/closure crew.
6. Ensure sanitation system recovery/closure.
7. Ensure marking of closed sanitation system.
8. Inspect closed/marked sanitation system.
9. Ensure inspection of closed/marked system by preventive medicine personnel.
10. Ensure closed latrine sites are recorded on area map.
11. Forward marked map to those concerned.

**PREREQUISITE EVENTS:**
1120-XENG-2758 1120-XENG-2658

**REFERENCES:**
1. FM 21-10 Field Hygiene and Sanitation
2. FM 21-10-1 Unit Field Sanitation
3. FM 3-34.471 Plumbing, Pipefitting, and Sewerage
4. NAVMED P-5010 Navy Sanitation

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**1120-XENG-2961:** Manage interior electrical wiring system installation

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Utilities Officer

**GRADES:** WO-1, CWO-2, CWO-3, CWO-4, CWO-5

**INITIAL TRAINING SETTING:** MOJT

**CONDITION:** Given a structure, blueprints, electrical plan, personnel, tools, bill of material, materials, and references.

**STANDARD:** To ensure required utilities services are established, resulting in effective service support to the unit, per the references.

**PERFORMANCE STEPS:**
1. Review blueprints, electrical plan, and Bill of Materials (BOM).
2. Determine safety/code requirements.
3. Inventory BOM.
4. Brief installation crew.
5. Manage installation crew.
6. Conduct final inspection of installed wiring system.

**REFERENCES:**
1. FM 5-553 General Drafting
2. TM 5-704 Construction Print Reading in the Field
3. TM 9406-15 Grounding Procedures for Electromagnetic Interference Control and Safety (Aug 91)
4. National Electrical Code

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**1120-XENG-2962:** Manage interior electrical wiring system repairs

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Utilities Officer

**GRADES:** WO-1, CWO-2, CWO-3, CWO-4, CWO-5

**INITIAL TRAINING SETTING:** MOJT

**CONDITION:** Provided a structure requiring interior electrical wiring system repairs, personnel, tools, materials, and references.

**STANDARD:** To ensure required utilities services are established, resulting in effective service support to the unit, per the references.

**PERFORMANCE STEPS:**
1. Examine the interior electrical wiring system needing repairs.
2. Determine safety/code requirements.
3. Determine material requirements.
4. Brief repair crew.
5. Manage repairs.
6. Conduct inspection of repaired wiring system.

**PREREQUISITE EVENTS:** 1120-XENG-2961

**REFERENCES:**
1. TM 9406-15 Grounding Procedures for Electromagnetic Interference Control and Safety (Aug 91)
2. National Electrical Code

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**1120-XENG-2971:** Manage interior heating, ventilation and air conditioning (HVAC) system installation

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Utilities Officer

**GRADES:** WO-1, CWO-2, CWO-3, CWO-4, CWO-5

**INITIAL TRAINING SETTING:** MOJT

**CONDITION:** Provided a structure, blueprints, HVAC plan, personnel, tools, bill of material, materials, and references.

**STANDARD:** To ensure required utilities services are established, resulting in effective service support to the unit, per the references.

**PERFORMANCE STEPS:**
1. Review blueprints, HVAC plan, and Bill of Materials (BOM).
2. Determine safety/code requirements.
3. Inventory BOM.
4. Brief installation crew.

5. Manage installation crew.
6. Conduct final inspection of installed HVAC system.

**PREREQUISITE EVENTS:** 1120-XENG-2571

**REFERENCES:**
1. FM 3-34.471 Plumbing, Pipefitting, and Sewerage
2. FM 5-553 General Drafting
3. TM 5-704 Construction Print Reading in the Field
4. TM 9406-15 Grounding Procedures for Electromagnetic Interference Control and Safety (Aug 91)

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**1120-XENG-2972:** Manage interior heating, ventilation and air conditioning (HVAC) system repairs

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Utilities Officer

**GRADES:** WO-1, CWO-2, CWO-3, CWO-4, CWO-5

**INITIAL TRAINING SETTING:** MOJT

**CONDITION:** Provided a structure requiring HVAC system repairs, personnel, tools, materials, and the references.

**STANDARD:** To ensure required utilities services are established, resulting in effective service support to the unit, per the references.

**PERFORMANCE STEPS:**
1. Examine the HVAC system needing repairs.
2. Determine safety/code requirements.
3. Determine material requirements.
4. Brief repair crew.
5. Manage repairs.
6. Conduct inspection of repaired HVAC system.

**PREREQUISITE EVENTS:**
1120-XENG-2971 1120-XENG-2571

**REFERENCES:**
1. FM 3-34.471 Plumbing, Pipefitting, and Sewerage
2. TM 9406-15 Grounding Procedures for Electromagnetic Interference Control and Safety (Aug 91)

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**1120-XENG-2987:** Manage interior plumbing system installation

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Utilities Officer

**GRADES:** WO-1, CWO-2, CWO-3, CWO-4, CWO-5

**INITIAL TRAINING SETTING:** MOJT

**CONDITION:** Provided a structure, blueprints, plumbing plan, personnel, tools, bill of material, materials, and references.

**STANDARD:** To ensure required utilities services are established, resulting in effective service support to the unit, per the references.

**PERFORMANCE STEPS:**
1. Review blueprints, plumbing plan, and Bill of Materials (BOM).
2. Determine safety/code requirements.
3. Inventory BOM.
4. Brief installation crew.
5. Manage installation crew.
6. Conduct final inspection of installed plumbing system.

**REFERENCES:**
1. FM 3-34.471 Plumbing, Pipefitting, and Sewerage
2. FM 5-163 Sewerage
3. FM 5-553 General Drafting
4. TM 5-704 Construction Print Reading in the Field
5. TM 9406-15 Grounding Procedures for Electromagnetic Interference Control and Safety (Aug 91)
6. National Plumbing Code

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**1120-XENG-2988:** Manage interior plumbing system repairs

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Utilities Officer

**GRADES:** WO-1, CWO-2, CWO-3, CWO-4, CWO-5

**INITIAL TRAINING SETTING:** MOJT

**CONDITION:** Provided a structure requiring interior plumbing system repairs, personnel, tools, materials, and the references.

**STANDARD:** To ensure required utilities services are established, resulting in effective service support to the unit, per the references.

**PERFORMANCE STEPS:**
1. Examine the plumbing system needing repairs.
2. Determine safety/code requirements.
3. Determine material requirements.
4. Brief repair crew.
5. Manage repairs.
6. Conduct inspection of repaired plumbing system.

**PREREQUISITE EVENTS:** 1120-XENG-2987

**REFERENCES:**
1. FM 3-34.471 Plumbing, Pipefitting, and Sewerage
2. FM 5-163 Sewerage

3. TM 9406-15 Grounding Procedures for Electromagnetic Interference Control and Safety (Aug 91)
4. National Plumbing Code

ENG & UTIL T&R MANUAL

CHAPTER 5

MOS 1141 INDIVIDUAL EVENTS

# CHAPTER 5

# MOS 1141 INDIVIDUAL EVENTS

**5000. PURPOSE.** This chapter includes all individual training events for the Electrician. An individual event is an event that a trained Electrician would accomplish in the execution of Mission Essential Tasks (METs). These events are linked to a Service-Level Mission Essential Task. This linkage tailor's individual and collective training for the selected MET. Each event is composed of an individual event title, condition, standard, performance steps, support requirements, and references. Accomplishment and proficiency level required is determined by the event standard.

**5001. ADMINISTRATIVE NOTES**

1. Individual T&R events are coded for ease of reference. Each event has a 4-4-4 character identifier. The first four characters represent the MOS (1141).

2. The second four characters represent the functional or duty area. For example:

ADMN - Administration
MANT - Maintenance
XENG - General Engineering

See Appendix A for a complete list of functional areas.

3. The first of the last four characters represent the level (1000 or 2000) and the last three characters the sequence (1001, 2101) of the event. The Electrician individual training events are separated into two levels:

1000 - Core Skills
2000 - Core Plus Skills

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5003. 1000-LEVEL EVENTS

**1141-ADMN-1001:** Conduct an Operational Risk Assessment (ORA)

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 6 months

**BILLETS:** Electrician

**GRADES:** PVT, PFC, LCPL, CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Given a task/mission, a Risk Management Worksheet, and references.

**STANDARD:** To ensure safety mishaps are mitigated through the use of risk management controls per the references.

**PERFORMANCE STEPS:**
1. Review task/mission.
2. Review references.
3. Identify hazards, recording them on Risk Management Worksheet.
4. Assess severity and probability of hazards to determine risk levels.
5. Develop risk control measures.
6. Make risk decisions and/or forward Risk Management Worksheet to supervisor for decision/approval.
7. Implement controls.

**RELATED EVENTS:**
1142-ADMN-1001 1171-ADMN-1001 1161-ADMN-1001

**REFERENCES:**
1. MCO 3500.27B Operational Risk Management (ORM) (MAY 2004)
2. MCRP 5-12.1C Risk Management (Feb 01)

**SUPPORT REQUIREMENTS:**

**MATERIAL:** Risk Management Worksheet.

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**1141-ADMN-1002:** Control (Lockout/Tagout) hazardous energy

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 6 months

**BILLETS:** Electrician

**GRADES:** PVT, PFC, LCPL, CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Provided equipment, equipment manuals, PPE, Lockout/Tagout devices, forms, and references.

**STANDARD:** To ensure safety procedures are performed to prevent electrical mishaps per the references.

**PERFORMANCE STEPS:**
1. Review references.
2. Locate all energy isolating devices and hazardous energy sources (NOTE: There may be more than one).
3. Obtain required number of Lockout/Tagout devices from program coordinator.
4. Notify all effected personnel and supervisors.
5. Shut down equipment/turn off circuit.
6. Dissipate or restrain any stored energy.
7. Apply Lockout/Tagout devices.
8. Verify energy is isolated/dissipated (test circuit).
9. Effect required service, maintenance, repairs or modifications to equipment/circuit.
10. Remove Lockout/Tagout devices.
11. Restore equipment/circuit to normal operation.
12. Return Lockout/Tagout devices to program coordinator.

**RELATED EVENTS:**
1142-ADMN-1002 1171-ADMN-1002 1161-ADMN-1002

**REFERENCES:**
1. NAVMC DIR 5100.8 Marine Corps Occupational Safety and Health (OSH) Program Manual (May 06)
2. UNIT SOP Unit's Standing Operating Procedures
3. Appropriate Technical Manuals

**SUPPORT REQUIREMENTS:**

**EQUIPMENT:** Personal Protective Equipment (PPE).

**MATERIAL:**
- Lockout/Tagout devices
- NAVMC 11403 (Lockout/Tagout Checklist)

**UNITS/PERSONNEL:** Lockout/Tagout Program Coordinator.

**MISCELLANEOUS:**

**ADMINISTRATIVE INSTRUCTIONS:** NAVMC Dir 5100.8, Chapter 12, provides detailed information for this event.

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**1141-ADMN-1003:** Recover an electric shock victim

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Electrician

**GRADES:** PVT, PFC, LCPL, CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Given an electrical mishap involving a potential casualty.

**STANDARD:** To ensure the performance of proper safety procedures to prevent further injury to personnel.

**PERFORMANCE STEPS:**
1. Evaluate situation.
2. Send for help.
3. Provide for personal protection.
4. Isolate victim from electrical source.
5. Evaluate victim.
6. Start artificial resuscitation (if necessary).
7. Remain with victim until medical help arrives.
8. Report incident.

**RELATED EVENTS:**

| | | |
|---|---|---|
| 1142-ADMN-1003 | 1161-ADMN-1003 | 1120-ADMN-2003 |
| 1171-ADMN-1003 | 1169-ADMN-2003 | |

**REFERENCES:**
1. FM 5-424 Theater of Operations Electrical Systems (Jun 97)
2. MCRP 3-02G First Aid (Dec 02)
3. TM 2000-15/4 Power System Reference Manual (Jul 68)
4. TM 9406-15 Grounding Procedures for Electromagnetic Interference Control and Safety (Aug 91)

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**1141-ADMN-1004:** Respond to a hazardous materials spill

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Electrician

**GRADES:** PVT, PFC, LCPL, CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Given a hazardous material mishap involving potential environmental damage.

**STANDARD:** To ensure the performance of proper containment procedures to prevent further environmental damage.

**PERFORMANCE STEPS:**
1. Evacuate immediate area (if necessary).
2. Contain spill.
3. Report spill.
4. Remove uncontaminated material.
5. Dispose of hazardous material.

**RELATED EVENTS:**

| | | |
|---|---|---|
| 1120-ADMN-2004 | 1142-ADMN-1004 | 1171-ADMN-1004 |
| 1169-ADMN-2004 | 1161-ADMN-1004 | |

**REFERENCES:**
1. MCO 4450.12A Storage and Handling of Hazardous Materials (Jan 99)
2. MCO P5090.2A Environmental Compliance and Protection Manual (Jul 98)

3. MCRP 4-11B Environmental Considerations in Military Operations (Jun 00)
4. UNIT SOP Unit's Standing Operating Procedures

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**1141-ADMN-1005:** Administer first aid for chemical ingestion/contact

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Electrician

**GRADES:** PVT, PFC, LCPL, CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Given a chemical mishap involving a potential casualty, Material Safety Data Sheets (MSDS).

**STANDARD:** To ensure the performance of proper safety procedures to prevent further injury to personnel.

**PERFORMANCE STEPS:**
1. Protect yourself and other personnel.
2. Send for help.
3. Review Material Safety Data Sheet (MSDS).
4. Provide for personal protection (PPE) (if required).
5. Give first aid.
6. Remain with victim until medical help arrives.
7. Report incident.

**RELATED EVENTS:**

| | | |
|---|---|---|
| 1120-ADMN-2005 | 1142-ADMN-1005 | 1171-ADMN-1005 |
| 1169-ADMN-2005 | 1161-ADMN-1005 | |

**REFERENCES:**
1. MCRP 3-02G First Aid (Dec 02)

**SUPPORT REQUIREMENTS:**

**EQUIPMENT:** Personal Protective Equipment (PPE).

**MATERIAL:** Material Safety Data Sheet (MSDS) file.

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**1141-ADMN-1007:** Conduct an SL-3 Components List/Basic Issue Items (BII) inventory

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 6 months

**BILLETS:** Electrician

**GRADES:** PVT, PFC, LCPL, CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Provided equipment and references.

**STANDARD:** To ensure accountability of all equipment components per the SL-3/BII list and the references.

**PERFORMANCE STEPS:**
1. Review references.
2. Obtain Components List (SL-3 or TM listing Basic Issue Items [BII]) for item.
3. Identify each component using the SL-3/BII.
4. Identify missing components.
5. Identify unserviceable components.
6. Document inventory results.
7. Report any inventory discrepancies and unserviceable components.

**PREREQUISITE EVENTS:** 1141-ADMN-1006

**RELATED EVENTS:**
1142-ADMN-1007 1171-ADMN-1007 1161-ADMN-1007

**REFERENCES:**
1. MCO P4400.150E Consumer-Level Supply Policy Manual (Jun 99)
2. MCO P4790.2C MIMMS Field Procedures Manual (JUL 94)
3. UNIT SOP Unit's Standing Operating Procedures
4. Appropriate Technical Manuals

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**1141-ADMN-1008:** Conduct a Limited Technical Inspection (LTI)

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Electrician

**GRADES:** PVT, PFC, LCPL, CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Provided equipment requiring inspection and the equipment's records, forms, tools, and references.

**STANDARD:** To document missing and unserviceable equipment components per the references.

**PERFORMANCE STEPS:**
1. Review references.
2. Lockout/Tagout equipment (if required).
3. Provide for personal protection (PPE) (if required).
4. Identify components.
5. Verify component function/serviceability.
6. Verify authorized modifications.
7. Record discrepancies (if any).
8. Attach NAVMC 1018 to equipment (if required).
9. Complete the NAVMC 10560.

**PREREQUISITE EVENTS:**
1141-ADMN-1006 1141-ADMN-1002 1141-ADMN-1007

**RELATED EVENTS:**
1161-ADMN-1008 1171-ADMN-1008 1142-ADMN-1008

**REFERENCES:**
1. MCO P4790.2C MIMMS Field Procedures Manual (JUL 94)
2. MCRP 4-11.4A Battle Damage Assessment and Repair
3. TM 4700-15/1H Ground Equipment Record Procedures (Jul 95)
4. TM 9-6115-624-BD Battlefield Damage Assessment and Repair for Generators (Sep 90)
5. UNIT SOP Unit's Standing Operating Procedures
6. Appropriate Technical Manuals

**SUPPORT REQUIREMENTS:**

**EQUIPMENT:** Personal Protective Equipment (PPE).

**MATERIAL:**
- NAVMC 1018 (Inspection/Repair Tag)
- NAVMC 10560 (Worksheet for Preventive Maintenance and Technical
- Inspection of Engineer Equipment [LTI])

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**1141-ADMN-1009:** Document equipment operation history

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Electrician

**GRADES:** PVT, PFC, LCPL, CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Provided equipment, equipment's records, forms, and references.

**STANDARD:** To ensure equipment hours of operation are correctly documented per the references.

**PERFORMANCE STEPS:**
1. Review references.
2. Validate equipment descriptive data on NAVMC 696D.
3. Ensure equipment descriptive data on NAVMC 10524 is correct.
4. Record hours/days equipment was operated (on NAVMC 10524).

**RELATED EVENTS:**
1142-ADMN-1009 1171-ADMN-1009 1161-ADMN-1009

**REFERENCES:**
1. TM 4700-15/1H Ground Equipment Record Procedures (Jul 95)
2. Appropriate Technical Manuals

**SUPPORT REQUIREMENTS:**

**MATERIAL:**
- NAVMC 696D (Motor Vehicle and Engineer Equipment Record Folder)

- NAVMC 10524 (Consolidated Engineer Equipment Operation Log and Service Record)

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**1141-ADMN-1010:** Requisition repair parts

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Electrician

**GRADES:** PVT, PFC, LCPL, CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Provided forms, a list of required parts/components, required unit unique data, equipment technical manuals, and references.

**STANDARD:** To ensure essential repair parts have been properly ordered per the references.

**PERFORMANCE STEPS:**
1. Review references.
2. Review equipment technical manuals and/or stock lists.
3. Complete NAVMC 10925 header information.
4. Annotate repair part/component information on the NAVMC 10925.
5. Submit NAVMC 10925 for input.
6. Follow up/reconcile requisitions (as needed/required).

**PREREQUISITE EVENTS:** 1141-ADMN-1006

**RELATED EVENTS:**
1141-ADMN-1011 1171-ADMN-1010 1161-ADMN-1010
1142-ADMN-1010

**REFERENCES:**
1. MCO P4790.2C MIMMS Field Procedures Manual (JUL 94)
2. TM 4700-15/1H Ground Equipment Record Procedures (Jul 95)
3. UM-4790-5 MIMMS-AIS Field Maintenance Procedures
4. UNIT SOP Unit's Standing Operating Procedures

**SUPPORT REQUIREMENTS:**

**MATERIAL:** NAVMC 10925 (Equipment Repair Order Shopping/Transaction List [EROSL])

**OTHER SUPPORT REQUIREMENTS:** Internet access, with a CAC card, may be required in order to complete this event per the Unit SOP.

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**1141-ADMN-1011:** Document equipment service/repair history

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 6 months

**BILLETS:** Electrician

**GRADES:** PVT, PFC, LCPL, CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Provided forms and references.

**STANDARD:** To ensure a completed Equipment Repair Order (NAVMC 10245) is accurate per equipment indicated, and the references.

**PERFORMANCE STEPS:**
1. Review references.
2. Fill out equipment descriptive data on NAVMC 10245.
3. Annotate NAVMC 10245 with service/repair actions taken.
4. Submit NAVMC 10245 for input.

**RELATED EVENTS:**

| | | |
|---|---|---|
| 1141-ADMN-1006 | 1141-ADMN-1008 | 1141-ADMN-1009 |
| 1171-ADMN-1011 | 1142-ADMN-1011 | 1161-ADMN-1011 |
| 1141-ADMN-1010 | | |

**REFERENCES:**
1. TM 4700-15/1H Ground Equipment Record Procedures (Jul 95)
2. UM-4790-5 MIMMS-AIS Field Maintenance Procedures
3. Appropriate Technical Manuals

**SUPPORT REQUIREMENTS:**

**MATERIAL:** NAVMC 10245 (Equipment Repair Order [ERO])

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**1141-ADMN-1012:** Initiate a Recommended Change to Technical Publications/Logistics-Maintenance Data Coding (NAVMC 10772)

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Electrician

**GRADES:** PVT, PFC, LCPL, CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Provided an identified error/deficiency to a technical publication and references.

**STANDARD:** To ensure corrections/improvements to technical publication(s) is submitted per the references.

**PERFORMANCE STEPS:**
1. Review references.
2. Determine if error/deficiency requires use of Part I or Part II of NAVMC 10772.
3. Fill in all required blocks of NAVMC 10772.
4. Forward completed NAVMC 10772 per unit's SOP.

**PREREQUISITE EVENTS:** 1141-ADMN-1006

**RELATED EVENTS:**
1142-ADMN-1012 1171-ADMN-1012 1161-ADMN-1012

**REFERENCES:**
1. MCO P5215.17C The Marine Corps Technical Publications System (Jun 96)
2. TM 4700-15/1H Ground Equipment Record Procedures (Jul 95)
3. UNIT SOP Unit's Standing Operating Procedures

**SUPPORT REQUIREMENTS:**

**MATERIAL:** NAVMC 10772 (Recommended Change to Technical Publications/Logistics-Maintenance Data Coding)

**OTHER SUPPORT REQUIREMENTS:** Internet access, with a CAC card, may be required in order to complete this event per Unit's SOP. The website used will be: https://pubs.logcom.usmc.mil.

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**1141-MANT-1101:** Operate a multimeter

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 6 months

**BILLETS:** Electrician

**GRADES:** PVT, PFC, LCPL, CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Provided equipment having an electrical circuit(s), multimeter, and references.

**STANDARD:** To ensure electrical circuit outputs are within standards.

**PERFORMANCE STEPS:**
1. Identify ELECTROCUTION HAZARD(S).
2. Determine correct setting (AC, DC, resistance or current).
3. Test circuit (voltage, resistance, current).
4. Record measurements/readings.
5. Analyze measurements/readings.

**RELATED EVENTS:**
1141-ADMN-1001 1141-ADMN-1002 1171-MANT-2101
1161-MANT-1101 1142-MANT-1101

**REFERENCES:**
1. IM 8024B Manufacturer's Instruction Manual for Fluke Model 8024B Digital Multimeter
2. NEC (NFPA 70) National Electrical Code - by National Fire Protection Association
3. TC 9-60 COMMUNICATIONS-ELECTRONICS FUNDAMENTALS, BASIC PRINCIPLES OF ALTERNATING CURRENT AND DIRECT CURRENT
4. TM 2000-15/4 Power System Reference Manual (Jul 68)
5. Appropriate Technical Manuals

**SUPPORT REQUIREMENTS:**

**EQUIPMENT:**
- Multimeter
- Equipment with an electrical circuit

---

**1141-MANT-1142:** Load test generator set(s)

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 6 months

**BILLETS:** Electrician

**GRADES:** PVT, PFC, LCPL, CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Provided equipment, tools, forms and references.

**STANDARD:** To ensure electrical power generation equipment performs to specifications per the references.

**PERFORMANCE STEPS:**
1. Identify ELECTROCUTION HAZARD(S).
2. Identify FIRE/EXPLOSION HAZARD(S).
3. Identify CARBON MONOXIDE HAZARD(S).
4. Review references, including generator technical manuals.
5. Don PPE.
6. Ground equipment.
7. Connect load bank to generator(s) (using over current protection).
8. Start generator(s), contacting load.
9. Perform before operation checks on load bank.
10. Apply load to generator(s).
11. Perform during operation checks on load bank.
12. Record readings from load bank.
13. Analyze data collected during test.
14. Disconnect load from generator(s).
15. Perform after operation checks on load bank.
16. Shut down load bank.
17. Shut down generator(s).
18. Disconnect load bank.
19. Record test results.

**PREREQUISITE EVENTS:** 1141-ADMN-1006

**RELATED EVENTS:**
1141-ADMN-1008 1142-MANT-1142 1141-ADMN-1011
1141-ADMN-1009

**REFERENCES:**
1. TM 07500C-OI Operation/Maintenance Manual with Repair Parts List for Load Bank, Electrical, 100kW, Model LSH100D42423
2. TM 4700-15/1H Ground Equipment Record Procedures (Jul 95)

3. TM 9406-15 Grounding Procedures for Electromagnetic Interference Control and Safety (Aug 91)
4. Appropriate Technical Manuals

**SUPPORT REQUIREMENTS:**

**EQUIPMENT:**
- Personal Protective Equipment (PPE)
- Tool Kit, Multi-Capable Maintainer [C7036]
- 100kW Electrical Load Bank [B0579]
- Generator(s) to be load tested

**MATERIAL:**
- NAVMC 10524 (Consolidated Engineer Equipment Operation Log and Service Record)
- Fuel

**MISCELLANEOUS:**

**ADMINISTRATIVE INSTRUCTIONS:** Graduates of the Basic Electrician Course (CID: M0311B2) are licensed operators of the 100kW Electrical Load Bank [B0579].

**SPECIAL PERSONNEL CERTS:** Only Electricians (MOS 1141) and Engineer Equipment Electrical Systems Technicians (MOS 1142) will be licensed to operate a 100kW Electrical Load Bank [B0579].

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**1141-MANT-1224:** Perform Preventive Maintenance Checks and Services (PMCS) on a Power Distribution Panel, Mobile Electric Power Distribution System Replacement (MEPDIS-R)

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Electrician

**GRADES:** PVT, PFC, LCPL, CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Provided equipment, tools, parts for scheduled services, forms and references.

**STANDARD:** To ensure electrical power equipment is maintained in an operational condition per TM 6110-OI/1.

**PERFORMANCE STEPS:**
1. Identify ELECTROCUTION HAZARD(S).
2. Review equipment technical manuals.
3. Review ERO.
4. Don PPE.
5. Connect generator.
6. Contain (Lockout/Tagout) hazardous energy.
7. Inspect equipment.

8. Service equipment.
9. Document maintenance performed and deficiencies/discrepancies noted.

**PREREQUISITE EVENTS:**
1141-ADMN-1002 1141-ADMN-1006

**RELATED EVENTS:**
1141-ADMN-1008 1141-ADMN-1007 1141-ADMN-1010
1141-ADMN-1011

**REFERENCES:**
1. FP 11183A Mobile Electric Power Distribution System Replacement (MEPDIS-R)
2. SI 6110-OI/1 Warranty Procedures for Mobile Electric Power Distribution System Replacement
3. SL-3-6110 Components List for Mobile Electric Power Distribution System Replacement (MEPDIS-R)
4. TM 4700-15/1H Ground Equipment Record Procedures (Jul 95)
5. TM 6110-OI/1 Operation/Maintenance Manual with Repair Parts List for Mobile Electric Power Distribution System Replacement (MEPDIS-R)
6. Appropriate Technical Manuals

**SUPPORT REQUIREMENTS:**

**EQUIPMENT:**
- Personal Protective Equipment (PPE)
- Tool Kit, Multi-Capable Maintainer [C7036]
- Power Distribution Panel, Mobile Electric Power Distribution System Replacement (MEPDIS-R):
  - 5kW Indoor [B0027]
  - 5kW Outdoor [B0028]
  - 15kW [B0029]
  - 30kW [B0030]
  - 100kW [B0031] - and/or -
  - 300kW [B0032]
- Generator

**MATERIAL:**
- NAVMC 10245 (Equipment Repair Order [ERO])
- NAVMC 10925 (Equipment Repair Order Shopping/Transaction List [EROSL])
- NAVMC 10560 (Worksheet for Preventive Maintenance and Technical Inspection for Engineer Equipment [LTI])

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**1141-MANT-1244:** Perform Preventive Maintenance Checks and Services (PMCS) on a Power Distribution Panel, Power Distribution System (MEPDIS)

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Electrician

**GRADES:** PVT, PFC, LCPL, CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Provided equipment, tools, parts for scheduled services, forms and references.

**STANDARD:** To ensure electrical power equipment is maintained in an operational condition per TM 09124A/09125A/09127A-14/1.

**PERFORMANCE STEPS:**
1. Identify ELECTROCUTION HAZARD(S).
2. Review equipment technical manuals.
3. Review ERO.
4. Don PPE.
5. Connect generator.
6. Contain (Lockout/Tagout) hazardous energy.
7. Inspect equipment.
8. Service equipment.
9. Document maintenance performed and deficiencies/discrepancies noted.

**PREREQUISITE EVENTS:**
1141-ADMN-1006 1141-ADMN-1002

**RELATED EVENTS:**
1141-ADMN-1008 1141-ADMN-1011 1141-ADMN-1010
1141-ADMN-1007

**REFERENCES:**
1. SL-3-09124A/09125A/09127A Components List for Power Distribution System, Models PD-100, PD-030, and PD-015
2. SL-4-09124A/09125A/09127A Repair Parts for Power Distribution System, Models PD-100, PD-030, and PD-015
3. TM 09124A/09125A/09127A-14/1 Operation and Maintenance for the Power Distribution System (PDIS), Models PD-100, PD-030, & PD-015
4. TM 4700-15/1H Ground Equipment Record Procedures (Jul 95)

**SUPPORT REQUIREMENTS:**

**EQUIPMENT:**
- Personal Protective Equipment (PPE)
- Tool Kit, Multi-Capable Maintainer [C7036]
- Power Distribution Panel, Power Distribution System (MEPDIS):
  - 15kW PD-015 [B0595]
  - 30kW PD-030 [B0600] - and/or -
  - 100kW PD-100 [B0605]
- Generator

**MATERIAL:**
- NAVMC 10245 (Equipment Repair Order [ERO])
- NAVMC 10925 (Equipment Repair Order Shopping/Transaction List [EROSL])
- NAVMC 10560 (Worksheet for Preventive Maintenance and Technical Inspection for Engineer Equipment [LTI])

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**1141-MANT-1246:** Perform Preventive Maintenance Checks and Services (PMCS) on a Model MLK-0000 Field Wiring Harness

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Electrician

**GRADES:** PVT, PFC, LCPL, CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Provided equipment, tools, parts for scheduled services, forms and references.

**STANDARD:** To ensure electrical power equipment is maintained in an operational condition per TM 09049A-12&P/1.

**PERFORMANCE STEPS:**
1. Review equipment technical manuals.
2. Inspect equipment.
3. Service equipment.
4. Document maintenance performed and deficiencies/discrepancies noted.

**PREREQUISITE EVENTS:** 1141-ADMN-1006

**RELATED EVENTS:**
1141-ADMN-1007 1141-ADMN-1011 1141-ADMN-1010

**REFERENCES:**
1. SL-3-09049A Components List for Field Wiring Harness, Model MLK-0000 (Jan 92)
2. TM 09049A-12&P/1 Operation and Maintenance Including Components List and Repair Parts List for Field Wiring Harness, Model MLK-0000, for Mobile Electrical Power Distribution System (MEPDIS)
3. TM 4700-15/1H Ground Equipment Record Procedures (Jul 95)

**SUPPORT REQUIREMENTS:**

**EQUIPMENT:** Model MLK-0000 Field Wiring Harness [B0608]

**MATERIAL:** SL-3 Inventory Sheet

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**1141-MANT-1247:** Perform Preventive Maintenance Checks and Services (PMCS) on a MLT5060MIT Floodlight Set

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Electrician

**GRADES:** PVT, PFC, LCPL, CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Provided equipment, tools, parts for scheduled services, forms and references.

**STANDARD:** To ensure electrical power equipment is maintained in an operational condition per TM 11120A-OI.

**PERFORMANCE STEPS:**
1. Identify ELECTROCUTION HAZARD(S).
2. Identify FIRE/EXPLOSION HAZARD(S).
3. Identify CARBON MONOXIDE HAZARD(S).
4. Review equipment technical manuals.
5. Review ERO.
6. Don PPE.
7. Contain (Lockout/Tagout) hazardous energy.
8. Inspect equipment.
9. Service equipment.
10. Document maintenance performed and deficiencies/discrepancies noted.

**PREREQUISITE EVENTS:**
1141-ADMN-1006 1141-ADMN-1002

**RELATED EVENTS:**
1141-ADMN-1008 1141-ADMN-1011 1141-ADMN-1010
1141-ADMN-1007

**REFERENCES:**
1. FP 11120A Floodlight Set, MLT5060MIT
2. MI 11120A-OI/1 Installation of Safety Modification Kit for the USMC Floodlight Set (FLS)(Model MLT5060MIT)
3. MI 11120A-OI/2 Modifications of the USMC Floodlight Set, Model MLT5060MIT
4. SI 11120A-OI/1 Warranty Procedures for B0640 Floodlight Set
5. TM 11120A-OI Operation/Maintenance Manual with Repair Parts List for Floodlight Set (Model MLT5060MIT)
6. TM 4700-15/1H Ground Equipment Record Procedures (Jul 95)

**SUPPORT REQUIREMENTS:**

**EQUIPMENT:**
- Personal Protective Equipment (PPE)
- Tool Kit, Multi-Capable Maintainer [C7036]
- MLT5060MIT Floodlight Set [B0640]

**MATERIAL:**
- NAVMC 10245 (Equipment Repair Order [ERO])
- NAVMC 10925 (Equipment Repair Order Shopping/Transaction List [EROSL])
- NAVMC 10560 (Worksheet for Preventive Maintenance and Technical Inspection for Engineer Equipment [LTI])
- Parts for scheduled services

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**1141-MANT-1251:** Perform Preventive Maintenance Checks and Services (PMCS) on a MEP-831A 3kW, 60Hz Tactical Quiet Generator Set

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Electrician

**GRADES:** PVT, PFC, LCPL, CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Provided equipment, tools, parts for scheduled services, forms and references.

**STANDARD:** To ensure electrical power equipment is maintained in an operational condition per TM 10155A-OI/1.

**PERFORMANCE STEPS:**
1. Identify ELECTROCUTION HAZARD(S).
2. Identify FIRE/EXPLOSION HAZARD(S).
3. Identify CARBON MONOXIDE HAZARD(S).
4. Review equipment technical manuals.
5. Review ERO.
6. Don PPE.
7. Contain (Lockout/Tagout) hazardous energy.
8. Inspect equipment.
9. Service equipment.
10. Document maintenance performed and deficiencies/discrepancies noted.

**PREREQUISITE EVENTS:**
1141-ADMN-1002 1141-ADMN-1006

**RELATED EVENTS:**
1141-ADMN-1008 1141-ADMN-1007 1141-ADMN-1010
1141-ADMN-1011

**REFERENCES:**
1. MI 10155A-OR/1 Installation of Pulse Solar Charger (PSC) on Tactical Quiet Generators (TQG), 3 Kilowatt 60 Hertz (MEP-831A)
2. MI 6115-OI/25C Trailer Mounting of 3kW, MEP-831A Generators on M116A2/3 Series Trailer
3. SL-3-6115 Components List for Generator Set, Diesel Engine Driven, Skid Mounted
4. TM 10155A-OI/1 Operator, Unit, and Direct Support Maintenance Manual (Including Repair Parts and Special Tools List) for 3kW Tactical Quiet Generator Set
5. TM 4700-15/1H Ground Equipment Record Procedures (Jul 95)
6. ULSS 004295-15B Marine Corps Family of Tactical Quiet Generators (TQGs)

**SUPPORT REQUIREMENTS:**

**EQUIPMENT:**
- Personal Protective Equipment (PPE)
- Tool Kit, Multi-Capable Maintainer [C7036]
- MEP-831A 3kW, 60Hz Tactical Quiet Generator Set [B0730]

**MATERIAL:**
- NAVMC 10245 (Equipment Repair Order [ERO])
- NAVMC 10925 (Equipment Repair Order Shopping/Transaction List [EROSL])
- NAVMC 10560 (Worksheet for Preventive Maintenance and Technical Inspection for Engineer Equipment [LTI])
- Parts for scheduled services

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**1141-MANT-1252:** Perform Preventive Maintenance Checks and Services (PMCS) on a MEP-803A 10kW, 60Hz Tactical Quiet Generator Set

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Electrician

**GRADES:** PVT, PFC, LCPL, CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Provided equipment, tools, parts for scheduled services, forms and references.

**STANDARD:** To ensure electrical power equipment is maintained in an operational condition per TM 09247A/09248A-10/1.

**PERFORMANCE STEPS:**
1. Identify ELECTROCUTION HAZARD(S).
2. Identify FIRE/EXPLOSION HAZARD(S).
3. Identify CARBON MONOXIDE HAZARD(S).
4. Review equipment technical manuals.
5. Review ERO.
6. Don PPE.
7. Contain (Lockout/Tagout) hazardous energy.
8. Inspect equipment.
9. Service equipment.
10. Document maintenance performed and deficiencies/discrepancies noted.

**PREREQUISITE EVENTS:**
1141-ADMN-1006 1141-ADMN-1002

**RELATED EVENTS:**
1141-ADMN-1008 1141-ADMN-1011 1141-ADMN-1010
1141-ADMN-1007

**REFERENCES:**
1. LI 09247A/09248A-12 Lubrication Instruction for Generator Set, Skid Mounted, Tactical Quiet, 10kw, MEP-803A/MEP-813A (Oct 96)
2. MI 09247A/09248A-OR/1 Installation of Pulse Solar Charger (PSC) on Tactical Quiet Generators (TQG), 10 Kilowatt 60 Hertz (MEP-803A) and 10 Kilowatt 400 Hertz (MEP-813A)
3. MI 6115-24/24D Trailer Mounting of 10kW, MEP-003A, MEP-112A, MEP-803A, MEP-813A Generators on M116A2/3 Series Trailer
4. SI 6115-12/4 Warranty Procedures for Tactical Quiet Generator Series (May 01)
5. SL-3-6115 Components List for Generator Set, Diesel Engine Driven, Skid Mounted
6. TB 9-6115-642-13 Operator, Unit and Direct Support Maintenance Manual for Winterization Kit Installed on Generator Set, Skid Mounted, Tactical Quiet, 10kW, 60 and 400 Hz, MEP-803A/MEP-813A
7. TI 08857A-20/1 Installation of Tactical Quiet MEP-803 10kw 60Hz Generator on Floodlight Set, Model SM-4A3-0 (Jul 00)
8. TM 09247A/09248A-10/1 Operator's Manual for Generator Set, Skid Mounted, Tactical Quiet, 10kw, MEP-803A/MEP-813A (Dec 92), w/Ch 1 (Aug 95) & Ch 2 (Oct 96)
9. TM 4700-15/1H Ground Equipment Record Procedures (Jul 95)
10. ULSS 004295-15B Marine Corps Family of Tactical Quiet Generators (TQGs)

**SUPPORT REQUIREMENTS:**

**EQUIPMENT:**
- Personal Protective Equipment (PPE)
- Tool Kit, Multi-Capable Maintainer [C7036]
- MEP-803A 10kW, 60Hz Tactical Quiet Generator Set [B0891]

**MATERIAL:**
- NAVMC 10245 (Equipment Repair Order [ERO])
- NAVMC 10925 (Equipment Repair Order Shopping/Transaction List [EROSL])
- NAVMC 10560 (Worksheet for Preventive Maintenance and Technical Inspection for Engineer Equipment [LTI])
- Parts for scheduled services

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**1141-MANT-1253:** Perform Preventive Maintenance Checks and Services (PMCS) on a MEP-813A 10kW, 400Hz Tactical Quiet Generator Set

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Electrician

**GRADES:** PVT, PFC, LCPL, CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Provided equipment, tools, parts for scheduled services, forms and references.

**STANDARD:** To ensure electrical power equipment is maintained in an operational condition per TM 09247A/09248A-10/1.

**PERFORMANCE STEPS:**
1. Identify ELECTROCUTION HAZARD(S).
2. Identify FIRE/EXPLOSION HAZARD(S).
3. Identify CARBON MONOXIDE HAZARD(S).
4. Review equipment technical manuals.
5. Review ERO.
6. Don PPE.
7. Contain (Lockout/Tagout) hazardous energy.
8. Inspect equipment.
9. Service equipment.
10. Document maintenance performed and deficiencies/discrepancies noted.

**PREREQUISITE EVENTS:**
1141-ADMN-1002 1141-ADMN-1006

**RELATED EVENTS:**
1141-ADMN-1008 1141-ADMN-1007 1141-ADMN-1010
1141-ADMN-1011

**REFERENCES:**
1. LI 09247A/09248A-12 Lubrication Instruction for Generator Set, Skid Mounted, Tactical Quiet, 10kw, MEP-803A/MEP-813A (Oct 96)

2. MI 09247A/09248A-OR/1 Installation of Pulse Solar Charger (PSC) on Tactical Quiet Generators (TQG), 10 Kilowatt 60 Hertz (MEP-803A) and 10 Kilowatt 400 Hertz (MEP-813A)
3. MI 6115-24/24D Trailer Mounting of 10kW, MEP-003A, MEP-112A, MEP-803A, MEP-813A Generators on M116A2/3 Series Trailer
4. SI 6115-12/4 Warranty Procedures for Tactical Quiet Generator Series (May 01)
5. SL-3-6115 Components List for Generator Set, Diesel Engine Driven, Skid Mounted
6. TB 9-6115-642-13 Operator, Unit and Direct Support Maintenance Manual for Winterization Kit Installed on Generator Set, Skid Mounted, Tactical Quiet, 10kW, 60 and 400 Hz, MEP-803A/MEP-813A
7. TM 09247A/09248A-10/1 Operator's Manual for Generator Set, Skid Mounted, Tactical Quiet, 10kw, MEP-803A/MEP-813A (Dec 92), w/Ch 1 (Aug 95) & Ch 2 (Oct 96)
8. TM 4700-15/1H Ground Equipment Record Procedures (Jul 95)
9. ULSS 004295-15B Marine Corps Family of Tactical Quiet Generators (TQGs)

**SUPPORT REQUIREMENTS:**

**EQUIPMENT:**
- Personal Protective Equipment (PPE)
- Tool Kit, Multi-Capable Maintainer [C7036]
- MEP-813A 10kW, 400Hz Tactical Quiet Generator Set [B0921]

**MATERIAL:**
- NAVMC 10245 (Equipment Repair Order [ERO])
- NAVMC 10925 (Equipment Repair Order Shopping/Transaction List [EROSL])
- NAVMC 10560 (Worksheet for Preventive Maintenance and Technical Inspection for Engineer Equipment [LTI])
- Parts for scheduled services

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**1141-MANT-1255:** Perform Preventive Maintenance Checks and Services (PMCS) on a MEP-805A 30kW, 50/60Hz Tactical Quiet Generator Set

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Electrician

**GRADES:** PVT, PFC, LCPL, CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Provided equipment, tools, parts for scheduled services, forms and references.

**STANDARD:** To ensure electrical power equipment is maintained in an operational condition per TM 09249A/09246A-10/1.

**PERFORMANCE STEPS:**
1. Identify ELECTROCUTION HAZARD(S).
2. Identify FIRE/EXPLOSION HAZARD(S).
3. Identify CARBON MONOXIDE HAZARD(S).

4. Review equipment technical manuals.
5. Review ERO.
6. Don PPE.
7. Contain (Lockout/Tagout) hazardous energy.
8. Inspect equipment.
9. Service equipment.
10. Document maintenance performed and deficiencies/discrepancies noted.

**PREREQUISITE EVENTS:**

1141-ADMN-1002 1141-ADMN-1006

**RELATED EVENTS:**

1141-ADMN-1008 1141-ADMN-1007 1141-ADMN-1010
1141-ADMN-1011

**REFERENCES:**

1. LI 09249A/09246A-12 Lubrication Instruction for Generator Set, Skid Mounted, Tactical Quiet, 30kW, 50/60 and 400 Hz, MEP-805A and MEP-815A
2. MI 6115-25/28 In Line Fuse Addition to Tactical Quiet Generator, Models MEP-805A, 806A, 815A and 816A
3. MI 6115-OR/27A Trailer Mounting of Tactical Quiet Generators (TQG), 30 Kilowatt 60 Hertz (MEP-805A/B) or 30 Kilowatt 400 Hertz (MEP-815A/B) on M353 Trailer
4. MI 6115-OR/31 Installation of Pulse Solar Charger (PSC) on Tactical Quiet Generators (TQG), 30 Kilowatt 60 Hertz (MEP-805A/B) and 30 Kilowatt 400 Hertz (MEP-815A/B)
5. SI 09249A/09246A-24 Warranty Program for Generator Set, Tactical Quiet, 30kW, 50/60 and 400 Hz, MEP-805A and MEP-815A
6. SI 6115-12/4 Warranty Procedures for Tactical Quiet Generator Series (May 01)
7. SL-3-6115 Components List for Generator Set, Diesel Engine Driven, Skid Mounted
8. TB 9-6115-644-13 Operator, Unit and Direct Support Maintenance Manual for Winterization Kit Installed on Generator Set, Skid Mounted, Tactical Quiet, 30kW, 50/60 and 400 Hz, MEP-805A/MEP-815A
9. TM 09249A/09246A-10/1 Operator's Manual for Generator Set, Skid Mounted, Tactical Quiet, 30kw, MEP-805A/MEP-815A (Jul 93), w/ Ch 1 (May 95) & Ch 2 (Oct 96)
10. TM 4700-15/1H Ground Equipment Record Procedures (Jul 95)
11. ULSS 004295-15B Marine Corps Family of Tactical Quiet Generators (TQGs)

**SUPPORT REQUIREMENTS:**

**EQUIPMENT:**

- Personal Protective Equipment (PPE)
- Tool Kit, Multi-Capable Maintainer [C7036]
- MEP-805A 30kW, 50/60Hz Tactical Quiet Generator Set [B0953]

**MATERIAL:**

- NAVMC 10245 (Equipment Repair Order [ERO])
- NAVMC 10925 (Equipment Repair Order Shopping/Transaction List [EROSL])
- NAVMC 10560 (Worksheet for Preventive Maintenance and Technical Inspection for Engineer Equipment [LTI])
- Parts for scheduled services

**1141-MANT-1256:** Perform Preventive Maintenance Checks and Services (PMCS) on a MEP-805B 30kW, 50/60Hz Tactical Quiet Generator Set

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Electrician

**GRADES:** PVT, PFC, LCPL, CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Provided equipment, tools, parts for scheduled services, forms and references.

**STANDARD:** To ensure electrical power equipment is maintained in an operational condition per TM 09249B/09246B-14.

**PERFORMANCE STEPS:**
1. Identify ELECTROCUTION HAZARD(S).
2. Identify FIRE/EXPLOSION HAZARD(S).
3. Identify CARBON MONOXIDE HAZARD(S).
4. Review equipment technical manuals.
5. Review ERO.
6. Don PPE.
7. Contain (Lockout/Tagout) hazardous energy.
8. Inspect equipment.
9. Service equipment.
10. Document maintenance performed and deficiencies/discrepancies noted.

**PREREQUISITE EVENTS:**
1141-ADMN-1006 1141-ADMN-1002

**RELATED EVENTS:**
1141-ADMN-1008 1141-ADMN-1011 1141-ADMN-1010
1141-ADMN-1007

**REFERENCES:**
1. MI 6115-34/30 Battery Charging Fuse Modification and Control Power Circuit to Tactical Quiet Generator Models MEP-805B, MEP-815B, MEP-806B, MEP-816B
2. MI 6115-OR/27A Trailer Mounting of Tactical Quiet Generators (TQG), 30 Kilowatt 60 Hertz (MEP-805A/B) or 30 Kilowatt 400 Hertz (MEP-815A/B) on M353 Trailer
3. MI 6115-OR/31 Installation of Pulse Solar Charger (PSC) on Tactical Quiet Generators (TQG), 30 Kilowatt 60 Hertz (MEP-805A/B) and 30 Kilowatt 400 Hertz (MEP-815A/B)
4. SL-3-6115 Components List for Generator Set, Diesel Engine Driven, Skid Mounted
5. TB 9-6115-671-24 Warranty Program for Generator Set, Tactical Quiet, 30kW, 50/60 and 400 Hz, MEP-805B and MEP-815B
6. TM 09249B/09246B-14 Operator, Unit, Direct Support and General Support Maintenance Manual for Generator Set, Skid Mounted, Tactical Quiet, 30 kW, MEP-805B/MEP-815B w/ Erratum
7. TM 09249B/09246B-24P/2 Unit, Direct Support and General Support Maintenance Repair Parts and Special Tools List for Generator Set, Skid Mounted, Tactical Quiet, 30kW, 50/60 and 400 Hz, MEP-805B and MEP-815B

8. TM 4700-15/1H Ground Equipment Record Procedures (Jul 95)
9. ULSS 004295-15B Marine Corps Family of Tactical Quiet Generators (TQGs)

**SUPPORT REQUIREMENTS:**

**EQUIPMENT:**
- Personal Protective Equipment (PPE)
- Tool Kit, Multi-Capable Maintainer [C7036]
- MEP-805B 30kW, 50/60Hz Tactical Quiet Generator Set [B0953]

**MATERIAL:**
- NAVMC 10245 (Equipment Repair Order [ERO])
- NAVMC 10925 (Equipment Repair Order Shopping/Transaction List [EROSL])
- NAVMC 10560 (Worksheet for Preventive Maintenance and Technical Inspection for Engineer Equipment [LTI])
- Parts for scheduled services

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**1141-MANT-1257:** Perform Preventive Maintenance Checks and Services (PMCS) on a MEP-815A 30kW, 400Hz Tactical Quiet Generator Set

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Electrician

**GRADES:** PVT, PFC, LCPL, CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Provided equipment, tools, parts for scheduled services, forms and references.

**STANDARD:** To ensure electrical power equipment is maintained in an operational condition per TM 09249A/09246A-10/1.

**PERFORMANCE STEPS:**
1. Identify ELECTROCUTION HAZARD(S).
2. Identify FIRE/EXPLOSION HAZARD(S).
3. Identify CARBON MONOXIDE HAZARD(S).
4. Review equipment technical manuals.
5. Review ERO.
6. Don PPE.
7. Contain (Lockout/Tagout) hazardous energy.
8. Inspect equipment.
9. Service equipment.
10. Document maintenance performed and deficiencies/discrepancies noted.

**PREREQUISITE EVENTS:**
1141-ADMN-1006 1141-ADMN-1002

**RELATED EVENTS:**
1141-ADMN-1008 1141-ADMN-1011 1141-ADMN-1010
1141-ADMN-1007

**REFERENCES:**

1. LI 09249A/09246A-12 Lubrication Instruction for Generator Set, Skid Mounted, Tactical Quiet, 30kW, 50/60 and 400 Hz, MEP-805A and MEP-815A
2. MI 6115-25/28 In Line Fuse Addition to Tactical Quiet Generator, Models MEP-805A, 806A, 815A and 816A
3. MI 6115-OR/27A Trailer Mounting of Tactical Quiet Generators (TQG), 30 Kilowatt 60 Hertz (MEP-805A/B) or 30 Kilowatt 400 Hertz (MEP-815A/B) on M353 Trailer
4. MI 6115-OR/31 Installation of Pulse Solar Charger (PSC) on Tactical Quiet Generators (TQG), 30 Kilowatt 60 Hertz (MEP-805A/B) and 30 Kilowatt 400 Hertz (MEP-815A/B)
5. SI 09249A/09246A-24 Warranty Program for Generator Set, Tactical Quiet, 30kW, 50/60 and 400 Hz, MEP-805A and MEP-815A
6. SI 6115-12/4 Warranty Procedures for Tactical Quiet Generator Series (May 01)
7. SL-3-6115 Components List for Generator Set, Diesel Engine Driven, Skid Mounted
8. TB 9-6115-644-13 Operator, Unit and Direct Support Maintenance Manual for Winterization Kit Installed on Generator Set, Skid Mounted, Tactical Quiet, 30kW, 50/60 and 400 Hz, MEP-805A/MEP-815A
9. TM 09249A/09246A-10/1 Operator's Manual for Generator Set, Skid Mounted, Tactical Quiet, 30kw, MEP-805A/MEP-815A (Jul 93), w/ Ch 1 (May 95) & Ch 2 (Oct 96)
10. TM 4700-15/1H Ground Equipment Record Procedures (Jul 95)
11. ULSS 004295-15B Marine Corps Family of Tactical Quiet Generators (TQGs)

**SUPPORT REQUIREMENTS:**

**EQUIPMENT:**
- Personal Protective Equipment (PPE)
- Tool Kit, Multi-Capable Maintainer [C7036]
- MEP-815A 30kW, 400Hz Tactical Quiet Generator Set [B0971]

**MATERIAL:**
- NAVMC 10245 (Equipment Repair Order [ERO])
- NAVMC 10925 (Equipment Repair Order Shopping/Transaction List [EROSL])
- NAVMC 10560 (Worksheet for Preventive Maintenance and Technical Inspection for Engineer Equipment [LTI])
- Parts for scheduled services

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**1141-MANT-1262:** Perform Preventive Maintenance Checks and Services (PMCS) on a MEP-806A 60kW, 50/60Hz Tactical Quiet Generator Set

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Electrician

**GRADES:** PVT, PFC, LCPL, CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Provided equipment, tools, parts for scheduled services, forms and references.

**STANDARD:** To ensure electrical power equipment is maintained in an operational condition per TM 09244A/09245A-10/1.

**PERFORMANCE STEPS:**

1. Identify ELECTROCUTION HAZARD(S).
2. Identify FIRE/EXPLOSION HAZARD(S).
3. Identify CARBON MONOXIDE HAZARD(S).
4. Review equipment technical manuals.
5. Review ERO.
6. Don PPE.
7. Contain (Lockout/Tagout) hazardous energy.
8. Inspect equipment.
9. Service equipment.
10. Document maintenance performed and deficiencies/discrepancies noted.

**PREREQUISITE EVENTS:**

1141-ADMN-1006 1141-ADMN-1002

**RELATED EVENTS:**

1141-ADMN-1008 1141-ADMN-1011 1141-ADMN-1010
1141-ADMN-1007

**REFERENCES:**

1. LI 09244A/09245A-12 Lubrication Instruction for Generator Set, Skid Mounted, Tactical Quiet, 60kW, 50/60 and 400 Hz, MEP-806A and MEP-816A
2. MI 6115-25/28 In Line Fuse Addition to Tactical Quiet Generator, Models MEP-805A, 806A, 815A and 816A
3. MI 6115-OR/26A Trailer Mounting of Tactical Quiet Generators (TQG), 60 Kilowatt 60 Hertz (MEP-806A/B) or 60 Kilowatt 400 Hertz (MEP-816A/B) on M353 Trailer
4. MI 6115-OR/32 Installation of Pulse Solar Charger (PSC) on Tactical Quiet Generators (TQG), 60 Kilowatt 60 Hertz (MEP-806A/B) and 60 Kilowatt 400 Hertz (MEP-816A/B)
5. SI 09244A/09245A-24 Warranty Program for Generator Set, Tactical Quiet, 60kW, 50/60 and 400 Hz, MEP-806A and MEP-816A
6. SI 6115-12/4 Warranty Procedures for Tactical Quiet Generator Series (May 01)
7. SL-3-6115 Components List for Generator Set, Diesel Engine Driven, Skid Mounted
8. TB 9-6115-645-13 Operator, Unit and Direct Support Maintenance Manual for Winterization Kit Installed on Generator Set, Skid Mounted, Tactical Quiet, 60kW, 50/60 and 400 Hz, MEP-806A/MEP-816A
9. TM 09244A/09245A-10/1 Operator's Manual for Generator Set, Skid Mounted, Tactical Quiet, 60kw, MEP-806A/MEP-816A (Jul 93), w/Ch 1 (May 95) & Ch 2 (Oct 96)
10. TM 4700-15/1H Ground Equipment Record Procedures (Jul 95)
11. ULSS 004295-15B Marine Corps Family of Tactical Quiet Generators (TQGs)

**SUPPORT REQUIREMENTS:**

**EQUIPMENT:**

- Personal Protective Equipment (PPE)
- Tool Kit, Multi-Capable Maintainer [C7036]
- MEP-806A 60kW, 50/60Hz Tactical Quiet Generator Set [B1021]

**MATERIAL:**
- NAVMC 10245 (Equipment Repair Order [ERO])
- NAVMC 10925 (Equipment Repair Order Shopping/Transaction List [EROSL])
- NAVMC 10560 (Worksheet for Preventive Maintenance and Technical Inspection for Engineer Equipment [LTI])
- Parts for scheduled services

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**1141-MANT-1263:** Perform Preventive Maintenance Checks and Services (PMCS) on a MEP-806B 60kW, 50/60Hz Tactical Quiet Generator Set

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Electrician

**GRADES:** PVT, PFC, LCPL, CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Provided equipment, tools, parts for scheduled services, forms and references.

**STANDARD:** To ensure electrical power equipment is maintained in an operational condition per TM 09244B/09245B-14/1.

**PERFORMANCE STEPS:**
1. Identify ELECTROCUTION HAZARD(S).
2. Identify FIRE/EXPLOSION HAZARD(S).
3. Identify CARBON MONOXIDE HAZARD(S).
4. Review equipment technical manuals.
5. Review ERO.
6. Don PPE.
7. Contain (Lockout/Tagout) hazardous energy.
8. Inspect equipment.
9. Service equipment.
10. Document maintenance performed and deficiencies/discrepancies noted.

**PREREQUISITE EVENTS:**
1141-ADMN-1002 1141-ADMN-1006

**RELATED EVENTS:**
1141-ADMN-1008 1141-ADMN-1007 1141-ADMN-1010
1141-ADMN-1011

**REFERENCES:**
1. MI 6115-34/30 Battery Charging Fuse Modification and Control Power Circuit to Tactical Quiet Generator Models MEP-805B, MEP-815B, MEP-806B, MEP-816B
2. MI 6115-OR/26A Trailer Mounting of Tactical Quiet Generators (TQG), 60 Kilowatt 60 Hertz (MEP-806A/B) or 60 Kilowatt 400 Hertz (MEP-816A/B) on M353 Trailer
3. MI 6115-OR/32 Installation of Pulse Solar Charger (PSC) on Tactical Quiet Generators (TQG), 60 Kilowatt 60 Hertz (MEP-806A/B) and 60 Kilowatt 400 Hertz (MEP-816A/B)
4. SL-3-6115 Components List for Generator Set, Diesel Engine Driven, Skid Mounted

5. TB 9-6115-672-24 Warranty Program for Generator Set, Tactical Quiet, 60kW, 50/60 and 400 Hz, MEP-806B and MEP-816B
6. TM 09244B/09245B-14/1 Operator, Unit, Direct Support and General Support Maintenance Manual for Generator Set, Skid Mounted, Tactical Quiet, 60kW, 50/60 and 400 Hz, MEP-806B and MEP-816B
7. TM 4700-15/1H Ground Equipment Record Procedures (Jul 95)
8. ULSS 004295-15B Marine Corps Family of Tactical Quiet Generators (TQGs)

**SUPPORT REQUIREMENTS:**

**EQUIPMENT:**
- Personal Protective Equipment (PPE)
- Tool Kit, Multi-Capable Maintainer [C7036]
- MEP-806B 60kW, 50/60Hz Tactical Quiet Generator Set [B1021]

**MATERIAL:**
- NAVMC 10245 (Equipment Repair Order [ERO])
- NAVMC 10925 (Equipment Repair Order Shopping/Transaction List [EROSL])
- NAVMC 10560 (Worksheet for Preventive Maintenance and Technical Inspection for Engineer Equipment [LTI])
- Parts for scheduled services

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**1141-MANT-1265:** Perform Preventive Maintenance Checks and Services (PMCS) on a MEP-807A 100kW, 50/60Hz Tactical Quiet Generator Set

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Electrician

**GRADES:** PVT, PFC, LCPL, CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Provided equipment, tools, parts for scheduled services, forms and references.

**STANDARD:** To ensure electrical power equipment is maintained in an operational condition per TM 07464C-10/1.

**PERFORMANCE STEPS:**
1. Identify ELECTROCUTION HAZARD(S).
2. Identify FIRE/EXPLOSION HAZARD(S).
3. Identify CARBON MONOXIDE HAZARD(S).
4. Review equipment technical manuals.
5. Review ERO.
6. Don PPE.
7. Contain (Lockout/Tagout) hazardous energy.
8. Inspect equipment.
9. Service equipment.
10. Document maintenance performed and deficiencies/discrepancies noted.

**PREREQUISITE EVENTS:**
1141-ADMN-1002 1141-ADMN-1006

**RELATED EVENTS:**
1141-ADMN-1008 1141-ADMN-1007 1141-ADMN-1010
1141-ADMN-1011

**REFERENCES:**
1. FP 07464C B1045 MEP-807A 100kW Tactical Quiet Generator (TQG)
2. SI 07464C-OI/1 Warranty Procedures for MEP-807A 100kW Tactical Quiet Generator
3. SL-3-6115 Components List for Generator Set, Diesel Engine Driven, Skid Mounted
4. TM 07464C-10/1 Operator's Manual for Generator Set, Skid Mounted, Tactical Quiet, 100kW, 50/60 Hz, MEP-807A
5. TM 07464C-24/2 Field and Sustainment Maintenance for Generator Set, Skid Mounted, Tactical Quiet, 100kW, 50/60 Hz, MEP-807A
6. TM 07464C-24P/3 Field and Sustainment Level Repair Parts and Special Tools List for Generator Set, Skid Mounted, Tactical Quiet, 100kW, 50/60 Hz, MEP-807A
7. TM 4700-15/1H Ground Equipment Record Procedures (Jul 95)
8. ULSS 004295-15B Marine Corps Family of Tactical Quiet Generators (TQGs)

**SUPPORT REQUIREMENTS:**

**EQUIPMENT:**
- Personal Protective Equipment (PPE)
- Tool Kit, Multi-Capable Maintainer [C7036]
- MEP-807A 100kW, 50/60Hz Tactical Quiet Generator Set [B1045]

**MATERIAL:**
- NAVMC 10245 (Equipment Repair Order [ERO])
- NAVMC 10925 (Equipment Repair Order Shopping/Transaction List [EROSL])
- NAVMC 10560 (Worksheet for Preventive Maintenance and Technical Inspection for Engineer Equipment [LTI])
- Parts for scheduled services

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**1141-MANT-1324:** Diagnose a Power Distribution Panel, Mobile Electric Power Distribution System Replacement (MEPDIS-R) malfunction

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Electrician

**GRADES:** PVT, PFC, LCPL, CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Provided a Limited Technical Inspection (LTI) on inoperable equipment, electrical power source, PPE, tools, test measurement and diagnostic equipment (TMDE), equipment records, forms, and references.

**STANDARD:** To ensure equipment faults are identified in order to initiate corrective action(s) per the references.

**PERFORMANCE STEPS:**
1. Identify ELECTROCUTION HAZARD(S).

2. Review LTI.
3. Review equipment technical manuals.
4. Don PPE.
5. Ensure equipment is grounded.
6. Ensure any hazardous energy is controlled (Lockout/Tagout).
7. Check switches for correct settings.
8. Isolate faulty component(s).
9. Determine if component fault was caused by a defect elsewhere.
10. Determine echelon(s) of maintenance.
11. Document findings (complete LTI/initiate ERO).
12. Initiate EROSL (if required).

**PREREQUISITE EVENTS:**
1141-ADMN-1006 1141-ADMN-1002

**RELATED EVENTS:**
1141-ADMN-1008 1141-MANT-1224 1141-ADMN-1011
1141-ADMN-1010

**REFERENCES:**
1. SI 6110-OI/1 Warranty Procedures for Mobile Electric Power Distribution System Replacement
2. TM 10209-10/1 Use and Care of Hand Tools & Measuring Tools
3. TM 4700-15/1H Ground Equipment Record Procedures (Jul 95)
4. TM 6110-OI/1 Operation/Maintenance Manual with Repair Parts List for Mobile Electric Power Distribution System Replacement (MEPDIS-R)
5. UM-4790-5 MIMMS-AIS Field Maintenance Procedures

**SUPPORT REQUIREMENTS:**

**EQUIPMENT:**
- Personal Protective Equipment (PPE)
- Tool Kit, Multi-Capable Maintainer [C7036]
- Faulty Power Distribution Panel, Mobile Electric Power Distribution System Replacement (MEPDIS-R):
  - 5kW Indoor [B0027]
  - 5kW Outdoor [B0028]
  - 15kW [B0029]
  - 30kW [B0030]
  - 100kW [B0031] - and/or -
  - 300kW [B0032]

**MATERIAL:**
- NAVMC 10245 (Equipment Repair Order [ERO])
- NAVMC 10925 (Equipment Repair Order Shopping/Transaction List [EROSL]) - NAVMC 10560 (Worksheet for Preventive Maintenance and TechnicalInspection for Engineer Equipment [LTI])

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**1141-MANT-1344:** Diagnose a Power Distribution Panel, Power Distribution System (MEPDIS) malfunction

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Electrician

**GRADES:** PVT, PFC, LCPL, CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Provided a Limited Technical Inspection (LTI) on inoperable equipment, electrical power source, PPE, tools, test measurement and diagnostic equipment (TMDE), equipment records, forms, and references.

**STANDARD:** To ensure equipment faults are identified in order to initiate corrective action(s) per the references.

**PERFORMANCE STEPS:**
1. Identify ELECTROCUTION HAZARD(S).
2. Review LTI.
3. Review equipment technical manuals.
4. Don PPE.
5. Ensure equipment is grounded.
6. Ensure any hazardous energy is controlled (Lockout/Tagout).
7. Check switches for correct settings.
8. Isolate faulty component(s).
9. Determine if component fault was caused by a defect elsewhere.
10. Determine echelon(s) of maintenance.
11. Document findings (complete LTI/initiate ERO).
12. Initiate EROSL (if required).

**PREREQUISITE EVENTS:**
1141-ADMN-1006 1141-ADMN-1002

**RELATED EVENTS:**
1141-ADMN-1008 1141-MANT-1244 1141-ADMN-1011
1141-ADMN-1010

**REFERENCES:**
1. SL-4-09124A/09125A/09127A Repair Parts for Power Distribution System, Models PD-100, PD-030, and PD-015
2. TM 09124A/09125A/09127A-14/1 Operation and Maintenance for the Power Distribution System (PDIS), Models PD-100, PD-030, & PD-015
3. TM 10209-10/1 Use and Care of Hand Tools & Measuring Tools
4. TM 4700-15/1H Ground Equipment Record Procedures (Jul 95)
5. UM-4790-5 MIMMS-AIS Field Maintenance Procedures

**SUPPORT REQUIREMENTS:**

**EQUIPMENT:**
- Personal Protective Equipment (PPE)
- Tool Kit, Multi-Capable Maintainer [C7036]
- Faulty Power Distribution Panel, Power Distribution System (MEPDIS):
  - 15kW PD-015 [B0595]
  - 30kW PD-030 [B0600] - and/or -
  - 100kW PD-100 [B0605]

**MATERIAL:**
- NAVMC 10245 (Equipment Repair Order [ERO])
- NAVMC 10925 (Equipment Repair Order Shopping/Transaction List [EROSL])

- NAVMC 10560 (Worksheet for Preventive Maintenance and Technical Inspection for Engineer Equipment [LTI])

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**1141-MANT-1346:** Diagnose a Model MLK-0000 Field Wiring Harness malfunction

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Electrician

**GRADES:** PVT, PFC, LCPL, CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Provided a Limited Technical Inspection (LTI) on inoperable equipment, electrical power source, PPE, tools, test measurement and diagnostic equipment (TMDE), equipment records, forms, and references.

**STANDARD:** To ensure equipment faults are identified in order to initiate corrective action(s) per the references.

**PERFORMANCE STEPS:**
1. Identify ELECTROCUTION HAZARD(S).
2. Review equipment technical manuals.
3. Don PPE.
4. Ensure equipment is grounded.
5. Ensure any hazardous energy is controlled (Lockout/Tagout).
6. Check switches for correct settings.
7. Isolate faulty component(s).
8. Determine if component fault was caused by a defect elsewhere.
9. Determine echelon(s) of maintenance.
10. Document findings.
11. Initiate EROSL (if required).

**PREREQUISITE EVENTS:**
1141-ADMN-1006 1141-ADMN-1002

**RELATED EVENTS:**
1141-ADMN-1008 1141-MANT-1246 1141-ADMN-1011
1141-ADMN-1010

**REFERENCES:**
1. TM 09049A-12&P/1 Operation and Maintenance Including Components List and Repair Parts List for Field Wiring Harness, Model MLK-0000, for Mobile Electrical Power Distribution System (MEPDIS)
2. TM 10209-10/1 Use and Care of Hand Tools & Measuring Tools
3. TM 4700-15/1H Ground Equipment Record Procedures (Jul 95)
4. UM-4790-5 MIMMS-AIS Field Maintenance Procedures

**SUPPORT REQUIREMENTS:**

**EQUIPMENT:**
- Personal Protective Equipment (PPE)
- Tool Kit, Multi-Capable Maintainer [C7036]
- Faulty Model MLK-0000 Field Wiring Harness [B0608] or components

**MATERIAL:**
- NAVMC 10245 (Equipment Repair Order [ERO])
- NAVMC 10925 (Equipment Repair Order Shopping/Transaction List [EROSL])

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**1141-MANT-1424:** Repair a Power Distribution Panel, Mobile Electric Power Distribution System Replacement (MEPDIS-R)

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Electrician

**GRADES:** PVT, PFC, LCPL, CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Provided an Equipment Repair Order (ERO) on degraded/deadlined equipment, the degraded/deadlined equipment, repair parts from ERO layette, tools, forms and references.

**STANDARD:** To ensure equipment is returned to a functional state to support unit operations in accordance with TM 6110-OI/1.

**PERFORMANCE STEPS:**
1. Identify ELECTROCUTION HAZARD(S).
2. Review ERO.
3. Inventory parts from ERO layette.
4. Review equipment technical manuals.
5. Don PPE.
6. Ensure equipment is grounded (or bonded to power source).
7. Ensure hazardous energy is controlled (Lockout/Tagout).
8. Remove faulty part(s).
9. Prepare area(s) for new part(s).
10. Attach new part(s), making necessary adjustments.
11. Test repairs.
12. Document repairs.

**PREREQUISITE EVENTS:**
1141-MANT-1324 1141-ADMN-1002

**RELATED EVENTS:**
1141-ADMN-1006 1141-MANT-1224 1141-ADMN-1011
1141-ADMN-1008

**REFERENCES:**
1. FP 11183A Mobile Electric Power Distribution System Replacement (MEPDIS-R)
2. SI 6110-OI/1 Warranty Procedures for Mobile Electric Power Distribution System Replacement
3. SL-3-6110 Components List for Mobile Electric Power Distribution System Replacement (MEPDIS-R)
4. TM 10209-10/1 Use and Care of Hand Tools & Measuring Tools
5. TM 4700-15/1H Ground Equipment Record Procedures (Jul 95)
6. TM 6110-OI/1 Operation/Maintenance Manual with Repair Parts List for Mobile Electric Power Distribution System Replacement (MEPDIS-R)

**SUPPORT REQUIREMENTS:**

**EQUIPMENT:**
- Personal Protective Equipment (PPE)
- Tool Kit, Multi-Capable Maintainer [C7036]
- Degraded/deadline Power Distribution Panel, Mobile Electric Power -Distribution System Replacement (MEPDIS-R):
  - 5kW Indoor [B0027]
  - 5kW Outdoor [B0028]
  - 15kW [B0029]
  - 30kW [B0030]
  - 100kW [B0031] - and/or -
  - 300kW [B0032]

**MATERIAL:**
- Repair parts
- NAVMC 10245 (Equipment Repair Order [ERO])
- NAVMC 10925 (Equipment Repair Order Shopping/Transaction List [EROSL])
- NAVMC 10560 (Worksheet for Preventive Maintenance and Technical Inspection for Engineer Equipment [LTI])

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**1141-MANT-1444:** Repair a Power Distribution Panel, Power Distribution System (MEPDIS)

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Electrician

**GRADES:** PVT, PFC, LCPL, CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Provided an Equipment Repair Order (ERO) on degraded/deadlined equipment, the degraded/deadlined equipment, repair parts from ERO layette, tools, forms and references.

**STANDARD:** To ensure equipment is returned to a functional state to support unit operations in accordance with TM 09124A/09125A/09127A-14/1.

**PERFORMANCE STEPS:**
1. Identify ELECTROCUTION HAZARD(S).
2. Review ERO.
3. Inventory parts from ERO layette.
4. Review equipment technical manuals.
5. Don PPE.
6. Ensure equipment is grounded (or bonded to power source).
7. Ensure hazardous energy is controlled (Lockout/Tagout).
8. Remove faulty part(s).
9. Prepare area(s) for new part(s).
10. Attach new part(s), making necessary adjustments.
11. Test repairs.
12. Document repairs.

**PREREQUISITE EVENTS:**
1141-MANT-1344 1141-ADMN-1002

**RELATED EVENTS:**
1141-ADMN-1006 1141-MANT-1244 1141-ADMN-1011
1141-ADMN-1008

**REFERENCES:**
1. SL-3-09124A/09125A/09127A Components List for Power Distribution System, Models PD-100, PD-030, and PD-015
2. SL-4-09124A/09125A/09127A Repair Parts for Power Distribution System, Models PD-100, PD-030, and PD-015
3. TM 09124A/09125A/09127A-14/1 Operation and Maintenance for the Power Distribution System (PDIS), Models PD-100, PD-030, & PD-015
4. TM 10209-10/1 Use and Care of Hand Tools & Measuring Tools
5. TM 4700-15/1H Ground Equipment Record Procedures (Jul 95)

**SUPPORT REQUIREMENTS:**

**EQUIPMENT:**
- Personal Protective Equipment (PPE)
- Tool Kit, Multi-Capable Maintainer [C7036]
- Degraded/deadline Power Distribution Panel, Power Distribution System (MEPDIS):
  - 15kW PD-015 [B0595]
  - 30kW PD-030 [B0600] - and/or -
  - 100kW PD-100 [B0605]

**MATERIAL:**
- Repair parts
- NAVMC 10245 (Equipment Repair Order [ERO])
- NAVMC 10925 (Equipment Repair Order Shopping/Transaction List [EROSL])
- NAVMC 10560 (Worksheet for Preventive Maintenance and Technical Inspection for Engineer Equipment [LTI])

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**1141-XENG-1601:** Establish a field grounding system

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Electrician

**GRADES:** PVT, PFC, LCPL, CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Provided an electrical support plan, an established Course of Action (COA), equipment, tools and references.

**STANDARD:** To ensure electrical power equipment static energy is sufficiently to prevent safety mishaps in accordance with FM 5-424, TM 9406-15 and equipment technical manuals.

**PERFORMANCE STEPS:**
1. Review electrical support plan and Course of Action (COA).

2. Review references.
3. Reassess operational risk.
4. Don PPE.
5. Prepare site.
6. Install grounding system.
7. Measure resistance to ground.
8. Record findings.
9. Analyze findings.
10. Make corrections (repeating as necessary).
11. Post safety/warning signs.
12. Camouflage system.

**PREREQUISITE EVENTS:**
1141-XENG-1703 1141-ADMN-1001

**RELATED EVENTS:**
1141-ADMN-1002 1141-XENG-2699 1141-XENG-1624
1141-XENG-1618

**REFERENCES:**
1. FM 5-424 Theater of Operations Electrical Systems (Jun 97)
2. TC 11-6 Grounding Techniques (Mar 89)
3. TM 5-690 Grounding and Bonding in Command, Control, Communications, Computer, Intelligence, Surveillance, and Reconnaissance (C4ISR) Facilities (Feb 02)
4. TM 9406-15 Grounding Procedures for Electromagnetic Interference Control and Safety (Aug 91)
5. Appropriate Technical Manuals

**SUPPORT REQUIREMENTS:**

**EQUIPMENT:**
- Personal Protective Equipment (PPE)
- Tool Kit, Lineman's Electrician (TK-1141) [B0062]
- Tool Kit, Multi-Capable Maintainer [C7036]
- Ground Rod(s), GP-16 [H7213] - and/or -
- Grounding Kit, MK-2551A/U [H7255] - Earthmoving equipment (if required to prepare site)

**MATERIAL:**
- Electrical support plan with established Course of Action (COA)
- Warning signs
- Water (if needed)
- Metal Plates (if needed)
- Chemicals (if needed)
  - Magnesium sulfate (Epsom salts)
  - Copper sulfate (blue vitriol)
  - Calcium chloride
  - Sodium chloride (common table salt) - or -
  - Potassium nitrate (saltpeter)

**UNITS/PERSONNEL:** MOS 1345 (Engineer Equipment Operator) may be needed to prepare site.

**MISCELLANEOUS:**

**ADMINISTRATIVE INSTRUCTIONS:** Tactical situation, ORA and other changes encountered at a given site may ultimately determine final COA for system development.

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**1141-XENG-1618:** Establish a generator site

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Electrician

**GRADES:** PVT, PFC, LCPL, CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Provided an electrical support plan and established Course of Action (COA), equipment, tools and references.

**STANDARD:** To ensure electrical power generation equipment support the unit's mission per the commander's intent, in accordance with FM 5-424 and equipment technical manuals.

**PERFORMANCE STEPS:**
1. Review electrical support plan and Course of Action (COA).
2. Review references.
3. Reassess operational risk.
4. Don PPE.
5. Prepare site, making provisions for refueling.
6. Install spill containment.
7. Set up generator(s) and any accessories.
8. Ground generator(s).
9. Post safety/warning signs.
10. Camouflage site.
11. Provide for security.

**PREREQUISITE EVENTS:** 1141-ADMN-1001

**RELATED EVENTS:** 1141-XENG-2699

**REFERENCES:**
1. FM 5-424 Theater of Operations Electrical Systems (Jun 97)
2. MCRP 4-11B Environmental Considerations in Military Operations (Jun 00)
3. Appropriate Technical Manuals

**SUPPORT REQUIREMENTS:**

**EQUIPMENT:**
- Personal Protective Equipment (PPE)
- Tool Kit, Lineman's Electrician (TK-1141) [B0062]
- Tool Kit, Multi-Capable Maintainer [C7036]
- Forklift (with capacity to lift generator(s))
- Earthmoving equipment (if required to prepare site)
- Generator(s) (size and quantity designated by electrical support plan)

**MATERIAL:**
- Electrical support plan with established Course of Action (COA)
- Spill containment materials
- Warning signs

**UNITS/PERSONNEL:** MOS 1345 (Engineer Equipment Operator) to prepare site and move generator(s).

**MISCELLANEOUS:**

**ADMINISTRATIVE INSTRUCTIONS:** Tactical situation, ORA and other changes encountered at a given site may ultimately determine final COA for site development.

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**1141-XENG-1624:** Install a power distribution system (MEPDIS/MEPDIS-R/Busbar)

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**DESCRIPTION:** Due to the hazards involved, to both personnel and equipment, MEPDIS/MEPDIS-R should only be installed by licensed (MOS 1141) Electricians.

**BILLETS:** Electrician

**GRADES:** PVT, PFC, LCPL, CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Provided an electrical support plan and established Course of Action (COA), equipment, tools and references.

**STANDARD:** To ensure electrical power generation equipment upgrades support life support requirements in accordance with commanders' concept of operations in accordance with FM 5-424 and equipment technical manuals.

**PERFORMANCE STEPS:**
1. Identify ELECTROCUTION HAZARD(S).
2. Review electrical support plan and Course of Action (COA).
3. Review references.
4. Reassess operational risk.
5. Don PPE.
6. Prepare site(s) for distribution panel(s)/busbar(s).
7. Install distribution panel(s)/busbar(s).
8. Install distribution cables.
9. Ground distribution system.
10. Post safety/warning signs.
11. Test distribution system.
12. Camouflage distribution system.
13. Provide for security.

**PREREQUISITE EVENTS:** 1141-ADMN-1001

**RELATED EVENTS:**
1141-XENG-1618 1141-XENG-2699

**REFERENCES:**

1. FM 5-424 Theater of Operations Electrical Systems (Jun 97)
2. MCRP 4-11B Environmental Considerations in Military Operations (Jun 00)
3. TM 09124A/09125A/09127A-14/1 Operation and Maintenance for the Power Distribution System (PDIS), Models PD-100, PD-030, & PD-015
4. TM 6110-OI/1 Operation/Maintenance Manual with Repair Parts List for Mobile Electric Power Distribution System Replacement (MEPDIS-R)

**SUPPORT REQUIREMENTS:**

**EQUIPMENT:**

- Personal Protective Equipment (PPE)
- Tool Kit, Lineman's Electrician (TK-1141) [B0062]
- Tool Kit, Multi-Capable Maintainer [C7036]
- Forklift (with capacity to lift distribution panels)
- Earthmoving equipment (if required to prepare site(s))
- Power Distribution Panel, Mobile Electric Power Distribution System Replacement (MEPDIS-R):
  - 5kW Indoor [B0027]
  - 5kW Outdoor [B0028]
  - 15kW [B0029]
  - 30kW [B0030]
  - 100kW [B0031] - and/or -
  - 300kW [B0032] - and/or -
    - Power Distribution Panel, Power Distribution System (MEPDIS):
    - 15kW PD-015 [B0595]
    - 30kW PD-030 [B0600] - and/or -
    - 100kW PD-100 [B0605]

      (Sizes and quantities as designated by the electrical support plan.)

**MATERIAL:**

- Electrical support plan with established Course of Action (COA)
- Warning signs
- Busbar (if required by electrical support plan)
- Conductors

**UNITS/PERSONNEL:** MOS 1345 (Engineer Equipment Operator) to prepare site(s) and move distribution panels.

**MISCELLANEOUS:**

**ADMINISTRATIVE INSTRUCTIONS:**

- Graduates of the Basic Electrician Course (CID: M0311B2) are licensed to install and operate both MEPDIS and MEPDIS-R [B0027, B0028, B0029, B0030, B0031, B0032, B0595, B0600 & B0605]. They are also taught how to install (but not how to construct) a busbar.
- Only licensed Marines (MOS 1141) will install/operate MEPDIS or MEPDIS-R.
- Tactical situation, ORA and other changes encountered at a given site may ultimately determine final COA for system installation.

**SPECIAL PERSONNEL CERTS:** Personnel must be licensed MOS 1141 electricians to install and operate both MEPDIS and MEPDIS-R [B0027, B0028, B0029, B0030, B0031, B0032, B0595, B0600 & B0605].

**1141-XENG-1646:** Install a field wiring harness

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Electrician

**GRADES:** PVT, PFC, LCPL, CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Provided a temporary field structure(s), with electrical support plan and established Course of Action (COA), equipment, tools and references.

**STANDARD:** To ensure electrical power generation equipment support life support requirements in accordance with commanders' concept of operations in accordance with FM 5-424 and TM 09049A-12&P/1.

**PERFORMANCE STEPS:**
1. Identify ELECTROCUTION HAZARD(S).
2. Review electrical support plan and Course of Action (COA).
3. Review references.
4. Reassess operational risk.
5. Don PPE.
6. Prepare structure(s) for wiring harness.
7. Ensure hazardous energy is controlled (Lockout/Tagout).
8. Install cable assemblies.
9. Install light bulbs.
10. Test installation.

**PREREQUISITE EVENTS:**
1141-ADMN-1002 1141-ADMN-1001

**RELATED EVENTS:** 1141-XENG-1624

**REFERENCES:**
1. FM 5-424 Theater of Operations Electrical Systems (Jun 97)
2. SL-3-09049A Components List for Field Wiring Harness, Model MLK-0000 (Jan 92)
3. TM 09049A-12&P/1 Operation and Maintenance Including Components List and Repair Parts List for Field Wiring Harness, Model MLK-0000, for Mobile Electrical Power Distribution System (MEPDIS)

**SUPPORT REQUIREMENTS:**

**ROOMS/BUILDINGS:** Temporary field structure(s) (normally General Purpose, Command Post and/or Maintenance Tents)

**EQUIPMENT:**
- Personal Protective Equipment (PPE)
- Tool Kit, Lineman's Electrician (TK-1141) [B0062]
- Model MLK-0000 Field Wiring Harness [B0608]

**MATERIAL:** Electrical support plan with established Course of Action (COA)

**1141-XENG-1692:** Connect an electric motor

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Electrician

**GRADES:** PVT, PFC, LCPL, CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Provided equipment containing an electric motor, electrical power source, tools and references.

**STANDARD:** To ensure electric motor is properly installed to provide required support in accordance with equipment manual(s).

**PERFORMANCE STEPS:**
1. Identify ELECTROCUTION HAZARD(S).
2. Review references.
3. Don PPE.
4. Ensure any stored/hazardous energy is dissipated/controlled (Lockout/Tagout).
5. Wire motor to equipment.
6. Ensure motor is grounded.
7. Test motor operation.

**PREREQUISITE EVENTS:**
1141-ADMN-1002 1141-ADMN-1006 1141-MANT-1101

**RELATED EVENTS:**
1142-MANT-1493 1141-XENG-1693

**REFERENCES:**
1. FM 5-424 Theater of Operations Electrical Systems (Jun 97)
2. NEC (NFPA 70) National Electrical Code - by National Fire Protection Association
3. TC 9-60 COMMUNICATIONS-ELECTRONICS FUNDAMENTALS, BASIC PRINCIPLES OF ALTERNATING CURRENT AND DIRECT CURRENT
4. TM 10209-10/1 Use and Care of Hand Tools & Measuring Tools
5. TM 2000-15/4 Power System Reference Manual (Jul 68)
6. TM 9406-15 Grounding Procedures for Electromagnetic Interference Control and Safety (Aug 91)
7. Appropriate Technical Manuals

**SUPPORT REQUIREMENTS:**

**EQUIPMENT:**
- Personal Protective Equipment (PPE)
- Tool Kit, Lineman's Electrician (TK-1141) [B0062]
- Tool Kit, Multi-Capable Maintainer [C7036]
- Equipment with an electric motor

**MATERIAL:**
- Wire
- Connector(s)

**OTHER SUPPORT REQUIREMENTS:** Electrical power source.

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**1141-XENG-1693:** Connect electric motor control circuits

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Electrician

**GRADES:** PVT, PFC, LCPL, CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Provided equipment containing an electric motor, electrical power source, tools, parts and references.

**STANDARD:** To ensure positive control of electric motor is established in accordance with equipment manual(s).

**PERFORMANCE STEPS:**
1. Identify ELECTROCUTION HAZARD(S).
2. Review references.
3. Don PPE.
4. Ensure any stored/hazardous energy is dissipated/controlled (Lockout/Tagout).
5. Identify motor control function.
6. Determine motor voltage requirement.
7. Wire motor control.
8. Inspect wiring.
9. Test motor operation.

**PREREQUISITE EVENTS:**
1141-ADMN-1002 1141-ADMN-1006 1141-MANT-1101

**RELATED EVENTS:**
1141-XENG-1692 1142-MANT-1493

**REFERENCES:**
1. FM 5-424 Theater of Operations Electrical Systems (Jun 97)
2. NEC (NFPA 70) National Electrical Code - by National Fire Protection Association
3. TC 9-60 COMMUNICATIONS-ELECTRONICS FUNDAMENTALS, BASIC PRINCIPLES OF ALTERNATING CURRENT AND DIRECT CURRENT
4. TM 10209-10/1 Use and Care of Hand Tools & Measuring Tools
5. TM 2000-15/4 Power System Reference Manual (Jul 68)
6. TM 9406-15 Grounding Procedures for Electromagnetic Interference Control and Safety (Aug 91)
7. Appropriate Technical Manuals

**SUPPORT REQUIREMENTS:**

**EQUIPMENT:**
- Personal Protective Equipment (PPE)
- Tool Kit, Lineman's Electrician (TK-1141) [B0062]
- Tool Kit, Multi-Capable Maintainer [C7036]

- Equipment with an electric motor
- Electric motor control

**MATERIAL:**
- Parts
- Wire
- Connector(s)

**OTHER SUPPORT REQUIREMENTS:** Electrical power source.

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**1141-XENG-1703:** Operate a clamp-on ground resistance tester

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Electrician

**GRADES:** PVT, PFC, LCPL, CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Provided a grounding system, established ground resistance parameters, and references.

**STANDARD:** To ensure accurate resistance measurements to prevent electrical power generation mishaps.

**PERFORMANCE STEPS:**
1. Review references and grounding parameters.
2. Perform pre-operation checks on tester.
3. Determine correct settings for the resistance tester.
4. Connect tester.
5. Test the ground.
6. Record findings.
7. Analyze findings.
8. Perform after operation checks on tester.

**RELATED EVENTS:** 1141-MANT-1101

**REFERENCES:**
1. SL-3-10096B Components List for Ohmmeter, Model 3711M
2. SL-3-11509A Components List for Tool Kit, Lineman's Electrician (TK-1141)
3. TC 11-6 Grounding Techniques (Mar 89)
4. TM 10096B-10/1 User Manual for Clamp-On Ground Resistance Tester, Models 3711 and 3731
5. TM 5-690 Grounding and Bonding in Command, Control, Communications, Computer, Intelligence, Surveillance, and Reconnaissance (C4ISR) Facilities (Feb 02)
6. TM 9406-15 Grounding Procedures for Electromagnetic Interference Control and Safety (Aug 91)
7. ULSS 007391-15 Ohmmeter (Clamp-on Meter AEMC 3711M)

**SUPPORT REQUIREMENTS:**

**EQUIPMENT:** Ohmmeter, Clamp-on, AEMC 3711M [A7057]

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**1141-XENG-1747:** Operate a floodlight set

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Electrician

**GRADES:** PVT, PFC, LCPL, CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Provided an electrical support plan, equipment, forms, and references.

**STANDARD:** To ensure safe operation of equipment in support of mission requirements and commanders' intent per TM 11120A-OI.

**PERFORMANCE STEPS:**
1. Identify ELECTROCUTION HAZARD(S).
2. Identify FIRE/EXPLOSION HAZARD(S).
3. Identify CARBON MONOXIDE HAZARD(S).
4. Review electrical support plan.
5. Review references.
6. Reassess operational risk.
7. Don PPE.
8. Place applicable environmental safeguards in place.
9. Set up floodlight set.
10. Post safety/warning signs.
11. Ensure equipment is grounded.
12. Perform before operation checks.
13. Start generator.
14. Illuminate designated area.
15. Perform during operation checks/services.
16. Maintain equipment logs.
17. Shut down equipment per operational situation.
18. Perform after operation checks.
19. Document equipment operation.
20. Pack out equipment for movement/retrograde.

**PREREQUISITE EVENTS:** 1141-ADMN-1001

**RELATED EVENTS:**
1141-MANT-1247 1141-ADMN-1009

**REFERENCES:**
1. FM 5-424 Theater of Operations Electrical Systems (Jun 97)
2. TM 11120A-OI Operation/Maintenance Manual with Repair Parts List for Floodlight Set (Model MLT5060MIT)
3. TM 4700-15/1H Ground Equipment Record Procedures (Jul 95)

**SUPPORT REQUIREMENTS:**

**EQUIPMENT:**
- Personal Protective Equipment (PPE)
- Floodlight Set, Model MLT5060MIT [B0640]

**MATERIAL:**
- Electrical support plan
- NAVMC 10524 (Consolidated Engineer Equipment Operation Log and Service Record)
- Fuel

**MISCELLANEOUS:**

**ADMINISTRATIVE INSTRUCTIONS:** Graduates of the Basic Electrician Course (CID: M0311B2) are licensed operators of the Model MLT5060MIT Floodlight Set [B0640]. All other operators will need to be licensed through an authorized licensing program in the Total Force.

**SPECIAL PERSONNEL CERTS:** Operators must be licensed to operate a Model MLT5060MIT Floodlight Set [B0640].

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**1141-XENG-1751:** Operate a MEP-831A 3kW 60Hz Tactical Quiet Generator Set

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Electrician

**GRADES:** PVT, PFC, LCPL, CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Provided an established generator site, with electrical support plan, forms, and references.

**STANDARD:** To ensure safe operation of equipment in support of mission requirements and commanders' intent per TM 11120A-OI.

**PERFORMANCE STEPS:**
1. Identify ELECTROCUTION HAZARD(S).
2. Identify FIRE/EXPLOSION HAZARD(S).
3. Identify CARBON MONOXIDE HAZARD(S).
4. Review electrical support plan.
5. Review references.
6. Reassess operational risk, ensuring warning signs are posted.
7. Don PPE.
8. Ensure equipment is grounded.
9. Perform before operation checks, including all electrical power cable connections.
10. Start up generator.
11. Contact load.
12. Perform during operation checks/services.
13. Maintain equipment logs.
14. Shut down equipment per operational situation.
15. Perform after operation checks.
16. Document equipment operation.
17. Pack out equipment for movement/retrograde.

**PREREQUISITE EVENTS:** 1141-ADMN-1001

**RELATED EVENTS:**
1141-MANT-1251 1141-ADMN-1009

**REFERENCES:**
1. TM 10155A-OI/1 Operator, Unit, and Direct Support Maintenance Manual (Including Repair Parts and Special Tools List) for 3kW Tactical Quiet Generator Set
2. TM 4700-15/1H Ground Equipment Record Procedures (Jul 95)

**SUPPORT REQUIREMENTS:**

**EQUIPMENT:**
- Personal Protective Equipment (PPE)
- MEP-831A 3kW 60Hz Tactical Quiet Generator Set [B0730]

**MATERIAL:**
- Electrical support plan
- NAVMC 10524 (Consolidated Engineer Equipment Operation Log and Service Record)
- Fuel

**MISCELLANEOUS:**

**ADMINISTRATIVE INSTRUCTIONS:** Graduates of the Basic Electrician Course (CID: M0311B2) are licensed operators of the MEP-831A 3kW 60Hz Tactical Quiet Generator Set [B0730]. All other operators will need to be licensed through an authorized licensing program in the Total Force.

**SPECIAL PERSONNEL CERTS:** Operators must be licensed to operate a MEP-831A 3kW 60Hz Tactical Quiet Generator Set [B0730].

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**1141-XENG-1752:** Operate a MEP-803A 10kW 60Hz Tactical Quiet Generator Set

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Electrician

**GRADES:** PVT, PFC, LCPL, CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Provided an established generator site, with electrical support plan, forms, and references.

**STANDARD:** To ensure safe operation of equipment in support of mission requirements and commanders' intent per TM 09247A/09248A-10/1.

**PERFORMANCE STEPS:**
1. Identify ELECTROCUTION HAZARD(S).
2. Identify FIRE/EXPLOSION HAZARD(S).
3. Identify CARBON MONOXIDE HAZARD(S).
4. Review electrical support plan.
5. Review references.
6. Reassess operational risk, ensuring warning signs are posted.

7. Don PPE.
8. Ensure equipment is grounded.
9. Perform before operation checks, including all electrical power cable connections.
10. Start up generator.
11. Check switches/gauges for correct settings.
12. Contact load.
13. Perform during operation checks/services.
14. Maintain equipment logs.
15. Shut down equipment per operational situation.
16. Perform after operation checks.
17. Document equipment operation.
18. Pack out equipment for movement/retrograde.

**PREREQUISITE EVENTS:** 1141-ADMN-1001

**RELATED EVENTS:**
1141-MANT-1252 1141-ADMN-1009

**REFERENCES:**
1. TM 09247A/09248A-10/1 Operator's Manual for Generator Set, Skid Mounted, Tactical Quiet, 10kw, MEP-803A/MEP-813A (Dec 92), w/Ch 1 (Aug 95) & Ch 2 (Oct 96)
2. TM 4700-15/1H Ground Equipment Record Procedures (Jul 95)

**SUPPORT REQUIREMENTS:**

**EQUIPMENT:**
- Personal Protective Equipment (PPE)
- MEP-803A 10kW 60Hz Tactical Quiet Generator Set [B0891]

**MATERIAL:**
- Electrical support plan
- NAVMC 10524 (Consolidated Engineer Equipment Operation Log and Service Record)
- Fuel

**MISCELLANEOUS:**

**ADMINISTRATIVE INSTRUCTIONS:** Graduates of the Basic Electrician Course (CID: M0311B2) are licensed operators of the MEP-803A 10kW 60Hz Tactical Quiet Generator Set [B0891]. All other operators will need to be licensed through an authorized licensing program in the Total Force.

**SPECIAL PERSONNEL CERTS:** Operators must be licensed to operate a MEP-803A 10kW 60Hz Tactical Quiet Generator Set [B0891].

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**1141-XENG-1753:** Operate a MEP-813A 10kW 400Hz Tactical Quiet Generator Set

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Electrician

**GRADES:** PVT, PFC, LCPL, CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Provided an established generator site, with electrical support plan, forms, and references.

**STANDARD:** To ensure safe operation of equipment in support of mission requirements and commanders' intent per TM 09247A/09248A-10/1.

**PERFORMANCE STEPS:**
1. Identify ELECTROCUTION HAZARD(S).
2. Identify FIRE/EXPLOSION HAZARD(S).
3. Identify CARBON MONOXIDE HAZARD(S).
4. Review electrical support plan.
5. Review references.
6. Reassess operational risk, ensuring warning signs are posted.
7. Don PPE.
8. Ensure equipment is grounded.
9. Perform before operation checks, including all electrical power cable connections.
10. Start up generator.
11. Check switches/gauges for correct settings.
12. Contact load.
13. Perform during operation checks/services.
14. Maintain equipment logs.
15. Shut down equipment per operational situation.
16. Perform after operation checks.
17. Document equipment operation.
18. Pack out equipment for movement/retrograde.

**PREREQUISITE EVENTS:** 1141-ADMN-1001

**RELATED EVENTS:**
1141-MANT-1253 1141-ADMN-1009

**REFERENCES:**
1. TM 09247A/09248A-10/1 Operator's Manual for Generator Set, Skid Mounted, Tactical Quiet, 10kw, MEP-803A/MEP-813A (Dec 92), w/Ch 1 (Aug 95) & Ch 2 (Oct 96)
2. TM 4700-15/1H Ground Equipment Record Procedures (Jul 95)

**SUPPORT REQUIREMENTS:**

**EQUIPMENT:**
- Personal Protective Equipment (PPE)
- MEP-813A 10kW 400Hz Tactical Quiet Generator Set [B0921]

**MATERIAL:**
- Electrical support plan
- NAVMC 10524 (Consolidated Engineer Equipment Operation Log and Service Record)
- Fuel

**MISCELLANEOUS:**

**ADMINISTRATIVE INSTRUCTIONS:** Graduates of the Basic Electrician Course (CID: M0311B2) are licensed operators of the MEP-813A 10kW 400Hz Tactical Quiet Generator Set [B0921]. All other operators will need to be licensed through an authorized licensing program in the Total Force.

**SPECIAL PERSONNEL CERTS:** Operators must be licensed to operate a MEP-813A 10kW 400Hz Tactical Quiet Generator Set [B0921].

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**1141-XENG-1755:** Operate a MEP-805A 30kW 50/60Hz Tactical Quiet Generator Set

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Electrician

**GRADES:** PVT, PFC, LCPL, CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Provided an established generator site, with electrical support plan, forms, and references.

**STANDARD:** To ensure safe operation of equipment in support of mission requirements and commanders' intent per TM 09249A/09246A-10/1.

**PERFORMANCE STEPS:**
1. Identify ELECTROCUTION HAZARD(S).
2. Identify FIRE/EXPLOSION HAZARD(S).
3. Identify CARBON MONOXIDE HAZARD(S).
4. Review electrical support plan.
5. Review references.
6. Reassess operational risk, ensuring warning signs are posted.
7. Don PPE.
8. Ensure equipment is grounded.
9. Perform before operation checks, including all electrical power cable connections.
10. Start up generator.
11. Check switches/gauges for correct settings.
12. Contact load.
13. Perform during operation checks/services.
14. Maintain equipment logs.
15. Shut down equipment per operational situation.
16. Perform after operation checks.
17. Document equipment operation.
18. Pack out equipment for movement/retrograde.

**PREREQUISITE EVENTS:** 1141-ADMN-1001

**RELATED EVENTS:**
1141-MANT-1255 1141-ADMN-1009

**REFERENCES:**

1. TM 09249A/09246A-10/1 Operator's Manual for Generator Set, Skid Mounted, Tactical Quiet, 30kw, MEP-805A/MEP-815A (Jul 93), w/ Ch 1 (May 95) & Ch 2 (Oct 96)
2. TM 4700-15/1H Ground Equipment Record Procedures (Jul 95)

**SUPPORT REQUIREMENTS:**

**EQUIPMENT:**
- Personal Protective Equipment (PPE)
- MEP-805A 30kW 50/60Hz Tactical Quiet Generator Set [B0953]

**MATERIAL:**
- Electrical support plan
- NAVMC 10524 (Consolidated Engineer Equipment Operation Log and Service Record)
- Fuel

**MISCELLANEOUS:**

**ADMINISTRATIVE INSTRUCTIONS:** Graduates of the Basic Electrician Course (CID: M0311B2) are licensed operators of the MEP-805A 30kW 50/60Hz Tactical Quiet Generator Set [B0953].

**SPECIAL PERSONNEL CERTS:** Only Electricians (MOS 1141) will be licensed to operate a MEP-805A 30kW 50/60Hz Tactical Quiet Generator Set [B0953].

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**1141-XENG-1756:** Operate a MEP-805B 30kW 50/60Hz Tactical Quiet Generator Set

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Electrician

**GRADES:** PVT, PFC, LCPL, CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Provided an established generator site, with electrical support plan, forms, and references.

**STANDARD:** To ensure safe operation of equipment in support of mission requirements and commanders' intent per TM 09249B/09246B-14.

**PERFORMANCE STEPS:**
1. Identify ELECTROCUTION HAZARD(S).
2. Identify FIRE/EXPLOSION HAZARD(S).
3. Identify CARBON MONOXIDE HAZARD(S).
4. Review electrical support plan.
5. Review references.
6. Reassess operational risk, ensuring warning signs are posted.
7. Don PPE.
8. Ensure equipment is grounded.
9. Perform before operation checks, including all electrical power cable connections.

10. Start up generator.
11. Check switches/gauges for correct settings.
12. Contact load.
13. Perform during operation checks/services.
14. Maintain equipment logs.
15. Shut down equipment per operational situation.
16. Perform after operation checks.
17. Document equipment operation.
18. Pack out equipment for movement/retrograde.

**PREREQUISITE EVENTS:** 1141-ADMN-1001

**RELATED EVENTS:**
1141-MANT-1256 1141-ADMN-1009

**REFERENCES:**
1. TM 09249B/09246B-14 Operator, Unit, Direct Support and General Support Maintenance Manual for Generator Set, Skid Mounted, Tactical Quiet, 30 kW, MEP-805B/MEP-815B w/ Erratum
2. TM 4700-15/1H Ground Equipment Record Procedures (Jul 95)

**SUPPORT REQUIREMENTS:**

**EQUIPMENT:**
- Personal Protective Equipment (PPE)
- MEP-805B 30kW 50/60Hz Tactical Quiet Generator Set [B0953]

**MATERIAL:**
- Electrical support plan
- NAVMC 10524 (Consolidated Engineer Equipment Operation Log and Service Record)
- Fuel

**MISCELLANEOUS:**

**ADMINISTRATIVE INSTRUCTIONS:** Graduates of the Basic Electrician Course (CID: M0311B2) are licensed operators of the MEP-805B 30kW 50/60Hz Tactical Quiet Generator Set [B0953].

**SPECIAL PERSONNEL CERTS:** Only Electricians (MOS 1141) will be licensed to operate a MEP-805B 30kW 50/60Hz Tactical Quiet Generator Set [B0953].

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**1141-XENG-1757:** Operate a MEP-815A 30kW 400Hz Tactical Quiet Generator Set

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Electrician

**GRADES:** PVT, PFC, LCPL, CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Provided an established generator site, with electrical support plan, forms, and references.

**STANDARD:** To ensure safe operation of equipment in support of mission requirements and commanders' intent per I TM 09249A/09246A-10/1.

**PERFORMANCE STEPS:**
1. Identify ELECTROCUTION HAZARD(S).
2. Identify FIRE/EXPLOSION HAZARD(S).
3. Identify CARBON MONOXIDE HAZARD(S).
4. Review electrical support plan.
5. Review references.
6. Reassess operational risk, ensuring warning signs are posted.
7. Don PPE.
8. Ensure equipment is grounded.
9. Perform before operation checks, including all electrical power cable connections.
10. Start up generator.
11. Check switches/gauges for correct settings.
12. Contact load.
13. Perform during operation checks/services.
14. Maintain equipment logs.
15. Shut down equipment per operational situation.
16. Perform after operation checks.
17. Document equipment operation.
18. Pack out equipment for movement/retrograde.

**PREREQUISITE EVENTS:** 1141-ADMN-1001

**RELATED EVENTS:**
1141-MANT-1257 1141-ADMN-1009

**REFERENCES:**
1. TM 09249A/09246A-10/1 Operator's Manual for Generator Set, Skid Mounted, Tactical Quiet, 30kw, MEP-805A/MEP-815A (Jul 93), w/Ch 1 (May 95) & Ch 2 (Oct 96)
2. TM 4700-15/1H Ground Equipment Record Procedures (Jul 95)

**SUPPORT REQUIREMENTS:**

**EQUIPMENT:**
- Personal Protective Equipment (PPE)
- MEP-815A 30kW 400Hz Tactical Quiet Generator Set [B0971]

**MATERIAL:**
- Electrical support plan
- NAVMC 10524 (Consolidated Engineer Equipment Operation Log and Service Record)
- Fuel

**MISCELLANEOUS:**

**ADMINISTRATIVE INSTRUCTIONS:** Graduates of the Basic Electrician Course (CID: M0311B2) are licensed operators of the MEP-815A 30kW 400Hz Tactical Quiet Generator Set [B0971].

**SPECIAL PERSONNEL CERTS:** Only Electricians (MOS 1141) will be licensed to operate a MEP-815A 30kW 400Hz Tactical Quiet Generator Set [B0971].

**1141-XENG-1762:** Operate a MEP-806A 60kW 50/60Hz Tactical Quiet Generator Set

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Electrician

**GRADES:** PVT, PFC, LCPL, CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Provided an established generator site, with electrical support plan, forms, and references.

**STANDARD:** To ensure safe operation of equipment in support of mission requirements and commanders' intent per TM 09244A/09245A-10/1.

**PERFORMANCE STEPS:**
1. Identify ELECTROCUTION HAZARD(S).
2. Identify FIRE/EXPLOSION HAZARD(S).
3. Identify CARBON MONOXIDE HAZARD(S).
4. Review electrical support plan.
5. Review references.
6. Reassess operational risk, ensuring warning signs are posted.
7. Don PPE.
8. Ensure equipment is grounded.
9. Perform before operation checks, including all electrical power cable connections.
10. Start up generator.
11. Check switches/gauges for correct settings.
12. Contact load.
13. Perform during operation checks/services.
14. Maintain equipment logs.
15. Shut down equipment per operational situation.
16. Perform after operation checks.
17. Document equipment operation.
18. Pack out equipment for movement/retrograde.

**PREREQUISITE EVENTS:** 1141-ADMN-1001

**RELATED EVENTS:**
1141-MANT-1262 1141-ADMN-1009

**REFERENCES:**
1. TM 09244A/09245A-10/1 Operator's Manual for Generator Set, Skid Mounted, Tactical Quiet, 60kw, MEP-806A/MEP-816A (Jul 93), w/Ch 1 (May 95) & Ch 2 (Oct 96)
2. TM 4700-15/1H Ground Equipment Record Procedures (Jul 95)

**SUPPORT REQUIREMENTS:**

**EQUIPMENT:**
- Personal Protective Equipment (PPE)
- MEP-806A 60kW 50/60Hz Tactical Quiet Generator Set [B1021]

**MATERIAL:**
- Electrical support plan
- NAVMC 10524 (Consolidated Engineer Equipment Operation Log and Service Record)
- Fuel

**MISCELLANEOUS:**

**ADMINISTRATIVE INSTRUCTIONS:** Graduates of the Basic Electrician Course (CID: M0311B2) are licensed operators of the MEP-806A 60kW 50/60Hz Tactical Quiet Generator Set [B1021].

**SPECIAL PERSONNEL CERTS:** Only Electricians (MOS 1141) will be licensed to operate a MEP-806A 60kW 50/60Hz Tactical Quiet Generator Set [B1021].

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**1141-XENG-1763:** Operate a MEP-806B 60kW 50/60Hz Tactical Quiet Generator Set

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Electrician

**GRADES:** PVT, PFC, LCPL, CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Provided an established generator site, with electrical support plan, forms, and references.

**STANDARD:** To ensure safe operation of equipment in support of mission requirements and commanders' intent per TM 09244B/09245B-14/1.

**PERFORMANCE STEPS:**
1. Identify ELECTROCUTION HAZARD(S).
2. Identify FIRE/EXPLOSION HAZARD(S).
3. Identify CARBON MONOXIDE HAZARD(S).
4. Review electrical support plan.
5. Review references.
6. Reassess operational risk, ensuring warning signs are posted.
7. Don PPE.
8. Ensure equipment is grounded.
9. Perform before operation checks, including all electrical power cable connections.
10. Start up generator.
11. Check switches/gauges for correct settings.
12. Contact load.
13. Perform during operation checks/services.
14. Maintain equipment logs.
15. Shut down equipment per operational situation.
16. Perform after operation checks.
17. Document equipment operation.
18. Pack out equipment for movement/retrograde.

**PREREQUISITE EVENTS:** 1141-ADMN-1001

**RELATED EVENTS:**
1141-MANT-1263 1141-ADMN-1009

**REFERENCES:**
1. TM 09244B/09245B-14/1 Operator, Unit, Direct Support and General Support Maintenance Manual for Generator Set, Skid Mounted, Tactical Quiet, 60kW, 50/60 and 400 Hz, MEP-806B and MEP-816B
2. TM 4700-15/1H Ground Equipment Record Procedures (Jul 95)

**SUPPORT REQUIREMENTS:**

**EQUIPMENT:**
- Personal Protective Equipment (PPE)
- MEP-806B 60kW 50/60Hz Tactical Quiet Generator Set [B1021]

**MATERIAL:**
- Electrical support plan
- NAVMC 10524 (Consolidated Engineer Equipment Operation Log and Service Record)
- Fuel

**MISCELLANEOUS:**

**ADMINISTRATIVE INSTRUCTIONS:** Graduates of the Basic Electrician Course (CID: M0311B2) are licensed operators of the MEP-806B 60kW 50/60Hz Tactical Quiet Generator Set [B1021].

**SPECIAL PERSONNEL CERTS:** Only Electricians (MOS 1141) will be licensed to operate a MEP-806B 60kW 50/60Hz Tactical Quiet Generator Set [B1021].

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**1141-XENG-1765:** Operate a MEP-807A 100kW 50/60Hz Tactical Quiet Generator Set

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Electrician

**GRADES:** PVT, PFC, LCPL, CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Provided an established generator site, with electrical support plan, forms, and references.

**STANDARD:** To ensure safe operation of equipment in support of mission requirements and commanders' intent per TM 07464C-10/1.

**PERFORMANCE STEPS:**
1. Identify ELECTROCUTION HAZARD(S).
2. Identify FIRE/EXPLOSION HAZARD(S).
3. Identify CARBON MONOXIDE HAZARD(S).
4. Review electrical support plan.
5. Review references.
6. Reassess operational risk, ensuring warning signs are posted.
7. Don PPE.

8. Ensure equipment is grounded.
9. Perform before operation checks, including all electrical power cable connections.
10. Start up generator.
11. Check switches/gauges for correct settings.
12. Contact load.
13. Perform during operation checks/services.
14. Maintain equipment logs.
15. Shut down equipment per operational situation.
16. Perform after operation checks.
17. Document equipment operation.
18. Pack out equipment for movement/retrograde.

**PREREQUISITE EVENTS:** 1141-ADMN-1001

**RELATED EVENTS:**
1141-MANT-1265 1141-ADMN-1009

**REFERENCES:**
1. TM 07464C-10/1 Operator's Manual for Generator Set, Skid Mounted, Tactical Quiet, 100kW, 50/60 Hz, MEP-807A
2. TM 4700-15/1H Ground Equipment Record Procedures (Jul 95)

**SUPPORT REQUIREMENTS:**

**EQUIPMENT:**
- Personal Protective Equipment (PPE)
- MEP-807A 100kW 50/60Hz Tactical Quiet Generator Set [B1045]

**MATERIAL:**
- Electrical support plan
- NAVMC 10524 (Consolidated Engineer Equipment Operation Log and Service Record)
- Fuel

**MISCELLANEOUS:**

**ADMINISTRATIVE INSTRUCTIONS:** Graduates of the Basic Electrician Course (CID: M0311B2) are licensed operators of the MEP-807A 100kW 50/60Hz Tactical Quiet Generator Set [B1045].

**SPECIAL PERSONNEL CERTS:** Only Electricians (MOS 1141) will be licensed to operate a MEP-807A 100kW 50/60Hz Tactical Quiet Generator Set [B1045].

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**1141-XENG-1795:** Parallel tactical generator sets

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Electrician

**GRADES:** PVT, PFC, LCPL, CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Provided an established generator site, with electrical support plan, equipment, tools, paralleling cable, conductors, over current protection and references.

**STANDARD:** To ensure technician can properly synchronize power equipment in order to share electrical load per the references.

**PERFORMANCE STEPS:**

1. Identify ELECTROCUTION HAZARD(S).
2. Identify FIRE/EXPLOSION HAZARD(S).
3. Identify CARBON MONOXIDE HAZARD(S).
4. Review electrical support plan.
5. Review references.
6. Reassess operational risk.
7. Don PPE.
8. Ensure generators are grounded.
9. Perform before operation checks on generators.
10. Connect generators with paralleling cable and conductors through over current protection.
11. Ensure all load/voltage requirements are observed.
12. Synchronize generators.
13. Contact load.
14. Make necessary adjustments.
15. Perform during operation checks/services.

**PREREQUISITE EVENTS:**

| | | |
|---|---|---|
| 1141-ADMN-1001 | 1141-XENG-1755 | 1141-XENG-1756 |
| 1141-XENG-1762 | 1141-XENG-1763 | 1141-XENG-1765 |
| 1141-XENG-1757 | | |

**RELATED EVENTS:**

| | | |
|---|---|---|
| 1141-XENG-2758 | 1141-XENG-2760 | 1142-MANT-1195 |
| 1141-XENG-2764 | 1141-XENG-2761 | |

**REFERENCES:**

1. FM 5-424 Theater of Operations Electrical Systems (Jun 97)
2. TM 9406-15 Grounding Procedures for Electromagnetic Interference Control and Safety (Aug 91)
3. Appropriate Technical Manuals

**SUPPORT REQUIREMENTS:**

**EQUIPMENT:**

- Personal Protective Equipment (PPE)
- Tool Kit, Lineman's Electrician (TK-1141) [B0062]
- Tool Kit, Multi-Capable Maintainer [C7036]
- Tactical generator sets (sizes designated by electrical support plan)

**MATERIAL:**

- Electrical support plan
- Paralleling cable
- Conductors
- Over current protection (MEPDIS/MEPDIS-R preferred if available)
- Fuel

**MISCELLANEOUS:**

**ADMINISTRATIVE INSTRUCTIONS:**
- Graduates of the Basic Electrician Course (CID: M0311B2) are trained and qualified to parallel generators.
- Only trained/qualified Marines (MOS 1141 & 1142) will parallel generators.

**SPECIAL PERSONNEL CERTS:** Due to the hazards involved, to both personnel and equipment, tactical generators should only be placed in parallel by licensed (MOS 1141) Electricians or qualified (MOS 1142) Engineer Equipment Electrical Systems Technicians.

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**1141-XENG-1961:** Install an interior electrical wiring system in a permanent structure

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Electrician

**GRADES:** PVT, PFC, LCPL, CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Provided a structure requiring electrical work, with an interior electrical plan, a Bill of Materials (BOM), tools and references.

**STANDARD:** To ensure proper installation of essential life support system(s) per mission requirements and references.

**PERFORMANCE STEPS:**
1. Identify ELECTROCUTION HAZARD(S).
2. Review Bill of Materials (BOM).
3. Inventory BOM.
4. Review references.
5. Review electrical plan.
6. Assess risks (ORM).
7. Don PPE.
8. Run wiring.
9. Install electrical devices.
10. Inspect wiring.
11. Test the electrical wiring system.

**PREREQUISITE EVENTS:** 1141-ADMN-1001

**RELATED EVENTS:**

| | | |
|---|---|---|
| 1141-ADMN-1002 | 1141-MANT-1101 | 1141-XENG-2603 |
| 1141-XENG-1692 | 1141-XENG-1693 | 1141-XENG-1646 |

**REFERENCES:**
1. FM 5-424 Theater of Operations Electrical Systems (Jun 97)
2. NEC (NFPA 70) National Electrical Code - by National Fire Protection Association

3. SL-3-11390A Components List for Tool Kit, Intermediate Level Electricians (I-Level Tool Kit)(TK-1141/1)
4. SL-3-11509A Components List for Tool Kit, Lineman's Electrician (TK-1141)
5. TM 10209-10/1 Use and Care of Hand Tools & Measuring Tools
6. TM 5-704 Construction Print Reading in the Field

**SUPPORT REQUIREMENTS:**

**EQUIPMENT:**
- Personal Protective Equipment (PPE)
- Tool Kit, Lineman's Electrician (TK-1141) [B0062]
- Tool Kit, Intermediate Level Electrician's (TK-1141/1) [B7900]

**MATERIAL:** Bill of Materials (BOM)

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**1141-XENG-1962:** Repair the interior electrical wiring system of a permanent structure

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Electrician

**GRADES:** PVT, PFC, LCPL, CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Provided a structure with a faulty electrical system, a report detailing specific repairs to be made, a Bill of Materials (BOM), tools and references.

**STANDARD:** To ensure life support system is returned to a functional state to support unit operations in accordance with mission specifications.

**PERFORMANCE STEPS:**
1. Identify ELECTROCUTION HAZARD(S).
2. Review the repairs to be made.
3. Review references.
4. Determine code requirements.
5. Identify risks (ORM).
6. Don PPE.
7. Isolate repair area (Lockout/Tagout).
8. Remove broken/damaged materials.
9. Make repairs.
10. Test repairs.

**PREREQUISITE EVENTS:**

| | | |
|---|---|---|
| 1141-ADMN-1001 | 1141-MANT-1101 | 1141-ADMN-1002 |

**RELATED EVENTS:**

| | | |
|---|---|---|
| 1141-XENG-1692 | 1141-MANT-1346 | 1141-XENG-2603 |
| 1141-XENG-1693 | | |

**REFERENCES:**
1. FM 5-424 Theater of Operations Electrical Systems (Jun 97)

2. NEC (NFPA 70) National Electrical Code - by National Fire Protection Association
3. SL-3-11390A Components List for Tool Kit, Intermediate Level Electricians (I-Level Tool Kit)(TK-1141/1)
4. SL-3-11509A Components List for Tool Kit, Lineman's Electrician (TK-1141)
5. TM 10209-10/1 Use and Care of Hand Tools & Measuring Tools

**SUPPORT REQUIREMENTS:**

**EQUIPMENT:**
- Personal Protective Equipment (PPE)
- Tool Kit, Lineman's Electrician (TK-1141) [B0062]
- Tool Kit, Intermediate Level Electrician's (TK-1141/1) [B7900]

**MATERIAL:** Bill of Materials (BOM)

## 5004. 2000-LEVEL EVENTS

**1141-ADMN-2021:** Apply safety programs

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Electrician

**GRADES:** CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Provided resources and references.

**STANDARD:** To ensure applicable safety measures are established per the references.

**PERFORMANCE STEPS:**
1. Review references.
2. Identify equipment safety requirements.
3. Identify personnel safety requirements.
4. Conduct Operational Risk Assessments.
5. Implement safety procedures.
6. Conduct safety awareness training.
7. Evaluate safety programs.
8. Enforce safety regulations.
9. Provide input for/submit required reports.

**PREREQUISITE EVENTS:**
1141-ADMN-1002 1141-ADMN-1001

**RELATED EVENTS:**
1142-ADMN-1002 1171-ADMN-1002 1161-ADMN-1002

**REFERENCES:**
1. MCO 3500.27B Operational Risk Management (ORM) (MAY 2004)
2. MCO 5100.19E Marine Corps Traffic Safety Program (Drive safe) (Dec 00)
3. MCO 5100.29A Marine Corps Safety Program (Jul 04)
4. MCO 5100.30A Marine Corps Off-Duty and Recreation Safety Program (Oct 01)
5. MCO 5100.34 Deadline Safety of Use Message Instructions to Suspend Operations of Marine Corps Ground Equipment and Weapons Systems and Safety of Use Alerts (Jan 07)
6. MCO 5100.8 Marine Corps Occupational Safety and Health (OSH) Policy Order (May 06)
7. MCO P5102.1B Navy & Marine Corps Mishap and Safety Investigation, Reporting, and Record Keeping Manual (Jan 05)
8. NAVMC DIR 5100.8 Marine Corps Occupational Safety and Health (OSH) Program Manual (May 06)
9. UNIT SOP Unit's Standing Operating Procedures
10. Appropriate Technical Manuals

**1141-ADMN-2022:** Apply environmental regulations

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Electrician

**GRADES:** CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Provided environmental guidelines, and references.

**STANDARD:** To ensure adherence to policies in accordance to references.

**PERFORMANCE STEPS:**
1. Review references.
2. Verify section's compliance with applicable environmental regulations and restrictions.
3. Monitor platoon/section hazardous material disposal program.
4. Maintain hazardous materials storage areas.
5. Maintain Material Safety Data Sheets (MSDS).
6. Report any situations that require reporting.

**PREREQUISITE EVENTS:** 1141-ADMN-1004

**RELATED EVENTS:**
1142-ADMN-2022 1171-ADMN-2022 1161-ADMN-2022

**REFERENCES:**
1. MCO 4450.12A Storage and Handling of Hazardous Materials (Jan 99)
2. MCO P5090.2A Environmental Compliance and Protection Manual (Jul 98)
3. MCRP 4-11B Environmental Considerations in Military Operations (Jun 00)
4. OPNAVINST 5090.1C Environmental Readiness Program Manual (Oct 07)
5. UNIT SOP Unit's Standing Operating Procedures

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**1141-ADMN-2023:** Conduct Military Occupational Specialty (MOS) training

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Electrician

**GRADES:** CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Provided training resources, records, and references.

**STANDARD:** To ensure MOS proficiency is maintained per the references.

**PERFORMANCE STEPS:**
1. Review references.
2. Identify individual training requirements (review T&R Manual and MOS Roadmaps).
3. Identify unit training requirements (review unit METL/Commander's intent).

4. Determine on the job and sustainment training requirements by grade and MOS.
5. Develop lesson plans.
6. Develop training methods/aids/materials (as required).
7. Conduct training.
8. Document training.
9. Encourage use of self-directed study and assist in providing resources.

**RELATED EVENTS:**
1142-ADMN-2023 1171-ADMN-2023 1161-ADMN-2023

**REFERENCES:**
1. MCO 1553.3A Unit Training Management (UTM) (Jan 04)
2. MCO 1553.4B Professional Military Education (PME) (Jan 08)
3. MCO 3500.26A Marine Corps Task List (MCTL-2.0)
4. MCRP 3-0A Unit Training Management Guide
5. MCRP 3-0B How to Conduct Training
6. NAVMC 3500.12 Marine Corps Engineer and Utilities Training and Readiness Manual
7. OPNAVINST 1560.10C Administration of the United Services Military Apprenticeship Program (USMAP) (Apr 07)
8. SAT MANUAL Systems Approach to Training (SAT) Manual (Jun 04)
9. UNIT SOP Unit's Standing Operating Procedures

**SUPPORT REQUIREMENTS:**

**OTHER SUPPORT REQUIREMENTS:** MOS Roadmaps are located at http://www.tecom.usmc.mil/g3/roadmap.htm.

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**1141-ADMN-2031:** Brief electrical safety to end users

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Electrician

**GRADES:** CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Provided a field electrical power generation and distribution system plan, sample warning signs, and references.

**STANDARD:** To ensure the compliance with established safety directives to prevent injury to personnel per the references.

**PERFORMANCE STEPS:**
1. Review electrical system plan and references.
2. Identify prohibited electrical equipment.
3. Identify prohibited practices.
4. Identify unsafe conditions.
5. Identify "Off Limit" areas.
6. Identify emergency procedures.
7. Assemble briefing notes and materials.

8. Deliver brief.
9. Supervise electrical safety compliance.

**PREREQUISITE EVENTS:** 1141-ADMN-1001

**RELATED EVENTS:**
1141-ADMN-1003 1169-ADMN-2031 1141-ADMN-1002

**REFERENCES:**
1. 29 CFR 1910.269 Chapter 29, Code of Federal Regulations, Part Number 1910 (Occupational Safety and Health Standards), Standard Number 269 - Electrical Power Generation, Transmission, and Distribution
2. 29 CFR 1910.301-399 Chapter 29, Code of Federal Regulations, Part Number 1910 (Occupational Safety and Health Standards), Subpart S, (Standard Numbers 301-399) - Electrical
3. FM 5-424 Theater of Operations Electrical Systems (Jun 97)
4. MCO 3500.27B Operational Risk Management (ORM) (MAY 2004)
5. MCRP 5-12.1C Risk Management (Feb 01)
6. NAVMC DIR 5100.8 Marine Corps Occupational Safety and Health (OSH) Program Manual (May 06)
7. NFPA 70 - NEC 2008 National Fire Protection Association (NFPA) National Electrical Code (NEC) - 2008 Edition
8. TM 11275-15/3D Principal Technical Characteristics of U.S. Marine Corps Engineer Equipment (May 02)
9. Appropriate Technical Manuals

**SUPPORT REQUIREMENTS:**

**MATERIAL:** Sample warning signs.

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**1141-ADMN-2032:** Conduct a pole top rescue

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**GRADES:** PVT, PFC, LCPL, CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** MOJT

**CONDITION:** Provided a lineman's tool kit and rope.

**STANDARD:** To ensure equipment operator can execute procedures to safely lower a suspended injured person to the ground without further injury.

**PERFORMANCE STEPS:**
1. Evaluate the situation.
2. Send for help.
3. Provide personal protection.
4. Climb to the rescue position (with rescue rope).
5. Evaluate the victim's condition.
6. Tie rescue rope to victim.
7. Lower victim to the ground.
8. Start artificial resuscitation (if necessary).
9. Remain with victim until medical help arrives.
10. Report incident.

**PREREQUISITE EVENTS:** 1141-XENG-2694

**REFERENCES:**
1. MCO 3500.27B Operational Risk Management (ORM) (MAY 2004)
2. MCRP 3-02G First Aid (Dec 02)
3. MCRP 5-12.1C Risk Management (Feb 01)

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**1141-ADMN-2041:** Initiate a Product Quality Deficiency Report (PQDR) (SF 368)

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Electrician

**GRADES:** CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Given a defective item, blank forms, and references.

**STANDARD:** To ensure deficiency is identified to effect corrections per the references.

**PERFORMANCE STEPS:**
1. Review references.
2. Verify deficiency requires a PQDR.
3. Determine if deficiency is Category I or Category II.
4. Collect data.
5. Establish exhibit controls using DD Forms 1575 and 2332 (if required).
6. Complete PQDR.
7. Submit PQDR per Unit SOP.

**RELATED EVENTS:**
1142-ADMN-2041 1171-ADMN-2041 1161-ADMN-2041

**REFERENCES:**
1. MCO 4855.10B Product Quality Deficiency Report (PQDR) (Jan 93)
2. TM 4700-15/1H Ground Equipment Record Procedures (Jul 95)
3. UNIT SOP Unit's Standing Operating Procedures
4. Appropriate Technical Manuals

**SUPPORT REQUIREMENTS:**

**MATERIAL:**
- DD Form 1575 (Suspended Tag - Materiel)
- DD Form 2332 (Product Quality Deficiency Report Exhibit)
- SF 368 (Product Quality Deficiency Report [PQDR])

**MISCELLANEOUS:**

**ADMINISTRATIVE INSTRUCTIONS:** Additional information for this event can be found at www.logcom.usmc.mil/pqdr.

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**1141-ADMN-2051:** Establish equipment preventive maintenance schedule

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Electrician

**GRADES:** CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Provided equipment records, forms and references.

**STANDARD:** To ensure preventive maintenance is scheduled per the references.

**PERFORMANCE STEPS:**
1. Review references.
2. Determine equipment Preventive Maintenance Checks and Services (PMCS) requirements.
3. Audit equipment records.
4. Complete NAVMC 10561.

**PREREQUISITE EVENTS:** 1141-ADMN-1011

**RELATED EVENTS:**
1142-ADMN-2051 1171-ADMN-2051 1161-ADMN-2051

**REFERENCES:**
1. MCO P4790.2C MIMMS Field Procedures Manual (JUL 94)
2. MCWP 4-11.4 Maintenance Operations
3. TM 4700-15/1H Ground Equipment Record Procedures (Jul 95)
4. UNIT SOP Unit's Standing Operating Procedures
5. Appropriate Technical Manuals

**SUPPORT REQUIREMENTS:**

**MATERIAL:** NAVMC 10561 (Preventive Maintenance Checks and Services (PMCS) Roster)

---

**1141-ADMN-2061:** Maintain Pre-Expended Bin (PEB)

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Electrician

**GRADES:** PVT, PFC, LCPL, CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** MOJT

**CONDITION:** Provided commander's pre-expended bin, (PEB) authorization and references.

**STANDARD:** To ensure common, low-cost, high usage parts are continuously available for immediate maintenance/repair of equipment per the references.

**PERFORMANCE STEPS:**
1. Review references.
2. Identify criteria for items placed in PEB.
3. Validate authorized PEB listing, ensuring it is signed annually by the commander.
4. Identify accountability requirements.
5. Account for parts when issued, ensuring advice code PB is used in documentation for items over $50 in value.
6. Requisition replacement parts, as required.
7. Roll back/dispose excess items.

**RELATED EVENTS:**
1142-ADMN-2061 1171-ADMN-2061 1161-ADMN-2061

**REFERENCES:**
1. MCO P4400.150E Consumer-Level Supply Policy Manual (Jun 99)
2. MCO P4790.2C MIMMS Field Procedures Manual (JUL 94)
3. UNIT SOP Unit's Standing Operating Procedures
4. Appropriate Technical Manuals

**SUPPORT REQUIREMENTS:**

**MATERIAL:** Storage bins

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**1141-ADMN-2062:** Maintain Equipment Repair Order (ERO) parts bins

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Electrician

**GRADES:** PVT, PFC, LCPL, CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** MOJT

**CONDITION:** Provided forms, parts storage bins, and references.

**STANDARD:** To ensure repair parts are available to effect repairs on organic equipment per the references.

**PERFORMANCE STEPS:**
1. Review references.
2. Receive repair parts, annotating EROSL, and placing repair parts in appropriate bin.
3. Take corrective action if repair parts do not match EROSL.
4. Maintain EROSL in appropriate bin, inventorying the bin every 2 weeks.
5. Issue repair parts, when all are received, annotating EROSL and ERO per unit's SOP.

**RELATED EVENTS:**
1142-ADMN-2062 1141-ADMN-2061 1171-ADMN-2062
1161-ADMN-2062

**REFERENCES:**
1. MCO P4790.2C MIMMS Field Procedures Manual (JUL 94)

2. TM 4700-15/1H Ground Equipment Record Procedures (Jul 95)
3. UNIT SOP Unit's Standing Operating Procedures

**SUPPORT REQUIREMENTS:**

**MATERIAL:** Storage bins; Forms

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**1141-ADMN-2071:** Monitor maintenance management reports

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Electrician

**GRADES:** CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** MOJT

**CONDITION:** Provided MIMMS (AIS) reports, supporting documentation, and references.

**STANDARD:** To ensure accuracy of essential reports per the references.

**PERFORMANCE STEPS:**
1. Monitor Daily Process Report (DPR).
2. Monitor Daily Transaction Listing (DTL).
3. Monitor Daily SASSY Transactions.
4. Monitor Daily LM2 Report.
5. Monitor Weekly TAM Report.
6. Monitor Weekly Maintenance Exceptions Report.
7. Monitor Weekly Material Report.
8. Monitor Weekly LM2 Report.
9. Monitor Weekly Shop Summary Report.
10. Monitor Class II Reports.

**REFERENCES:**
1. MCBUL 3000 Table of Marine Corps Ground Equipment Resources Reporting
2. MCO 3000.11_ Marine Corps Ground Equipment Resources Reporting
3. MCO 4400.16G Uniform Materiel Movement and Issue Priority System (Jun 85)
4. MCO P4790.2C MIMMS Field Procedures Manual (JUL 94)
5. TM 4700-15/1H Ground Equipment Record Procedures
6. UM 4400-124 FMF SASSY Using Unit Procedures
7. UM-4790-5 MIMMS-AIS Field Maintenance Procedures
8. UNIT SOP Unit's Standing Operating Procedures

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**1141-ADMN-2072:** Monitor maintenance related programs

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Electrician

**GRADES:** CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** MOJT

**CONDITION:** Provided equipment and references.

**STANDARD:** To ensure equipment readiness is maintained to support unit operations.

**PERFORMANCE STEPS:**
1. Review references.
2. Determine unit's maintenance program requirements.
3. Inspect equipment.
4. Monitor Modification Control program.
5. Monitor Calibration Control program.
6. Monitor New Equipment Warranty program.
7. Monitor Joint Oil Analysis Program (JOAP).
8. Monitor Replacement Evacuation (R&E) program.
9. Monitor Quality Deficiency (QDR) program.
10. Monitor Recoverable Items (WIR) program.
11. Monitor Quality Control (QC) program.
12. Monitor Corrosion Prevention and Control (CPAC) program.
13. Ensure program and equipment records are maintained.

**RELATED EVENTS:**

| | | |
|---|---|---|
| 1141-ADMN-2041 | 1141-ADMN-2051 | 1141-ADMN-2071 |
| 1171-ADMN-2072 | 1142-ADMN-2072 | 1161-ADMN-2072 |
| 1169-ADMN-2072 | 1141-ADMN-2073 | |

**REFERENCES:**
1. MCO 4400.194 Class VII Stock Rotation Program
2. MCO 4731.1A Oil Analysis Program for Ground Equipment (Nov 90)
3. MCO 4733.1B Marine Corps Test, Measurement, and Diagnostic Equipment (TMDE) Calibration and Maintenance Program (CAMP) (Jun 99)
4. MCO 4790.18B Corrosion Prevention and Control (CPAC) Program (Jul 04)
5. MCO P4400.150E Consumer-Level Supply Policy Manual (Jun 99)
6. MCO P4400.82F Regulated/Controlled Item Management Manual (Feb 85)
7. MCO P4790.2C MIMMS Field Procedures Manual (JUL 94)
8. TI 4733-15/1 Calibration Requirements Test, Measurement and Diagnostic Equipment (TMDE) Calibration and Maintenance Program
9. TI-4731-14/1C MC Joint Oil Analysis Program
10. TM 4700-15/1H Ground Equipment Record Procedures
11. TM 750-245-4 Direct Support, General Support Quality Control Inspector's Inspection Criteria
12. UNIT SOP Unit's Standing Operating Procedures
13. Appropriate Technical Manuals

**MISCELLANEOUS:**

**ADMINISTRATIVE INSTRUCTIONS:** Some programs listed above may not be required at all units.

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**1141-ADMN-2073:** Inspect maintenance actions (quality control)

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Electrician

**GRADES:** CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Provided repaired equipment, maintenance forms and references.

**STANDARD:** To ensure equipment repairs have been completed in accordance with references.

**PERFORMANCE STEPS:**
1. Review references.
2. Review Equipment Repair Order (ERO).
3. Verify equipment's operational condition.
4. Reject faulty equipment.
5. Verify equipment closeout.
6. Verify completion of maintenance actions.

**PREREQUISITE EVENTS:** 1141-ADMN-1008

**RELATED EVENTS:**

| | | |
|---|---|---|
| 1141-ADMN-1011 | 1142-ADMN-2073 | 1141-ADMN-1009 |
| 1171-ADMN-2073 | 1161-ADMN-2073 | |

**REFERENCES:**
1. MCO P4790.2C MIMMS Field Procedures Manual (JUL 94)
2. TM 4700-15/1H Ground Equipment Record Procedures (Jul 95)
3. TM 750-245-4 Direct Support, General Support Quality Control Inspector's Inspection Criteria
4. UM-4790-5 MIMMS-AIS Field Maintenance Procedures
5. Appropriate Technical Manuals

**SUPPORT REQUIREMENTS:**

**EQUIPMENT:** Repaired equipment

**MATERIAL:** NAVMC 696D (Motor Vehicle and Engineer Equipment Record Folder)

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**1141-ADMN-2081:** Prepare equipment for embarkation

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Electrician

**GRADES:** PVT, PFC, LCPL, CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** MOJT

**CONDITION:** Provided a mission, equipment, and references.

**STANDARD:** To ensure the unit's ability to rapidly deploy in accordance with references.

**PERFORMANCE STEPS:**
1. Review the MDSS II, MAFTG II LOGAIS, and/or JOPES reports.

2. Inspect assigned equipment.
3. Identify Remain Behind Equipment (RBE).
4. Identify Leave Behind Equipment (LBE).
5. Determine safety/environmental considerations.
6. Mark equipment for transportation/embarkation to include LOGMARS labels.
7. Disassemble, stow, pack, and/or prepare equipment for transportation/embarkation.
8. Coordinate with unit embark personnel to ensure that discrepancies with MDSS II, MAGTF II LOGAIS, and or JOPES reports are corrected.

**REFERENCES:**
1. DODD 4500.9 Transportation and Traffic Management
2. FM 101-10-1_ Organizational, Technical and Logistical Data
3. FM 55-15 Transportation Reference Data
4. FM 55-9 Unit Air Movement Planning
5. FMFM 3-1 Command and Staff Action
6. FMFM 4-6 Movement of Units in Air Force Aircraft
7. JOINT PUB 3-02 Joint Doctrine for Amphibious Operations
8. MCO 4610.35 USMC Equipment Characteristics File
9. MCO P4030.19_ Preparing Hazardous Materials for Military Air Shipments
10. MCO P4600.7_ USMC Transportation Manual
11. MCWP 3-31.5 Ship-to-Shore Movement
12. MCWP 4-11.3 Transportation Operations
13. NAVMC/MCO 3000.18 Marine Corps Planner's Manual
14. TM 4700-15/1H Ground Equipment Record Procedures
15. TM 4750-15/2 Painting and Registration Marking for Marine Corps Combat and
16. TM 55-2200-001-12 Application of Blocking, Bracing, and Tie Down Material

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**1141-MANT-2104:** Operate an electrical pulse analyzer

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Electrician

**GRADES:** PVT, PFC, LCPL, CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** MOJT

**CONDITION:** Provided an electrical circuit, pulse analyzer, and references.

**STANDARD:** To ensure electrical outputs at specific points in the circuit are within standards.

**PERFORMANCE STEPS:**
1. Identify ELECTROCUTION HAZARD(S).
2. Review references.
3. Perform pre-operation checks on analyzer.
4. Determine correct setting.
5. Test circuit.
6. Record measurements/readings.
7. Analyze measurements/readings.
8. Perform after operation checks on analyzer.

**RELATED EVENTS:**
1141-MANT-1101 1141-ADMN-1002

**REFERENCES:**
1. FP 11072B Analyzer, Electrical Pulse (Fluke 43B)
2. SL-3-11072B Components List for Analyzer, Electrical Pulse, Model 43B/AN
3. TC 9-60 COMMUNICATIONS-ELECTRONICS FUNDAMENTALS, BASIC PRINCIPLES OF ALTERNATING CURRENT AND DIRECT CURRENT
4. TC 9-62 Communications-Electronics Fundamentals, Solid State Devices and Solid State Power Supplies and Amplifiers
5. TM 11072B-OI/1 Users Manual for Fluke 43B Power Quality Analyzer
6. TM 2000-15/4 Power System Reference Manual (Jul 68)
7. Appropriate Technical Manuals

**SUPPORT REQUIREMENTS:**

**EQUIPMENT:** Fluke 43B/AN Electrical Pulse Analyzer [B7001]

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**1141-MANT-2191:** Comply with a Modification Instruction (MI)

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Electrician

**GRADES:** PVT, PFC, LCPL, CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** MOJT

**CONDITION:** Provided an Equipment Repair Order (ERO) on effected equipment, the effected equipment, a Modification Instruction (MI), parts, tools, forms and references.

**STANDARD:** To ensure required corrective maintenance action(s) have been performed to restore equipment to operational condition.

**PERFORMANCE STEPS:**
1. Review MI.
2. Review ERO.
3. Inventory parts from ERO layette.
4. Review equipment technical manuals.
5. Don PPE (if required).
6. Apply modification.
7. Test modification.
8. Document modification.

**PREREQUISITE EVENTS:** 1141-ADMN-1006

**RELATED EVENTS:**

| | | |
|---|---|---|
| 1141-ADMN-1008 | 1141-ADMN-1010 | 1171-MANT-2191 |
| 1142-MANT-2191 | 1161-MANT-1191 | 1141-ADMN-1011 |

**REFERENCES:**
1. TM 4700-15/1H Ground Equipment Record Procedures (Jul 95)
2. Appropriate Technical Manuals

**SUPPORT REQUIREMENTS:**

**EQUIPMENT:**
- Personal Protective Equipment (PPE)
- Tool Kit, Multi-Capable Maintainer [C7036]
- Electrical equipment being modified

**MATERIAL:**
- Modification Instruction (MI)
- Parts (if required)
- NAVMC 10245 (Equipment Repair Order [ERO])
- NAVMC 10524 (Consolidated Engineer Equipment Operation Log and Service Record)
- NAVMC 10925 (Equipment Repair Order Shopping/Transaction List [EROSL])
- NAVMC 696D (Motor Vehicle and Engineer Equipment Record Folder)

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**1141-MANT-2199:** Mount/dismount a generator set on a trailer

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Electrician

**GRADES:** PVT, PFC, LCPL, CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** MOJT

**CONDITION:** Provided a generator set, trailer, forklift or crane, tools, and references.

**STANDARD:** To ensure electrical power equipment is properly installed on trailer assets per the references.

**PERFORMANCE STEPS:**
1. Review references.
2. Lift generator set on to trailer.
3. Fasten generator set to trailer.
4. Reverse procedure to dismount generator set.

**REFERENCES:**
1. MI 6115-24/24C Trailer Mounting of 10kw Generators on M116A2/3 Series Trailer (Jul 04)
2. MI-6115-34/18 MI-6115-34/18

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**1141-MANT-2218:** Perform Preventive Maintenance Checks and Services (PMCS) on an Integrated Trailer/ECU/Generator (ITEG)

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Electrician

**GRADES:** PVT, PFC, LCPL, CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** MOJT

**CONDITION:** Provided equipment, tools, parts for scheduled services, forms and references.

**STANDARD:** To ensure electrical power equipment is maintained in an operational condition per TM 11490A-OR.

**PERFORMANCE STEPS:**
1. Identify ELECTROCUTION HAZARD(S).
2. Identify FIRE/EXPLOSION HAZARD(S).
3. Identify CARBON MONOXIDE HAZARD(S).
4. Review equipment technical manuals.
5. Review ERO.
6. Don PPE.
7. Contain (Lockout/Tagout) hazardous energy.
8. Inspect equipment.
9. Service equipment.
10. Document maintenance performed and deficiencies/discrepancies noted.

**PREREQUISITE EVENTS:**
1141-ADMN-1006 1141-ADMN-1002

**RELATED EVENTS:**
1141-ADMN-1007 1141-ADMN-1011 1141-ADMN-1010
1141-ADMN-1008

**REFERENCES:**
1. FP 11490A Integrated Trailer Environmental Control Unit & Generator (ITEG)
2. SI 11490A-OI Warranty Procedures for the Integrated Trailer-ECU-Generator
3. SL-3-11490A Components List for Integrated Trailer, Environmental Control Unit, Generator (ITEG)
4. TM 11490A-OR Operation Manual with Repair Parts List, Integrated Trailer-ECU-Generator (ITEG)
5. TM 4700-15/1H Ground Equipment Record Procedures (Jul 95)

**SUPPORT REQUIREMENTS:**

**EQUIPMENT:**
- Personal Protective Equipment (PPE)
- Tool Kit, Multi-Capable Maintainer [C7036]
- Integrated Trailer, Environmental Control Unit, Generator (ITEG) [B0018]

**MATERIAL:**
- NAVMC 10245 (Equipment Repair Order [ERO])
- NAVMC 10925 (Equipment Repair Order Shopping/Transaction List [EROSL])
- NAVMC 10560 (Worksheet for Preventive Maintenance and Technical Inspection for Engineer Equipment [LTI])
- Parts for scheduled services

**MISCELLANEOUS:**

**ADMINISTRATIVE INSTRUCTIONS:** Assistance from a Refrigeration and Air Conditioning Technician (MOS 1161) is required for PMCS on the ECU portion of the ITEG.

**1141-MANT-2236:** Perform Preventive Maintenance Checks and Services (PMCS) on a MEP-802A 5kW 60Hz Tactical Quiet Generator Set

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Electrician

**GRADES:** PVT, PFC, LCPL, CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** MOJT

**CONDITION:** Provided equipment, tools, parts for scheduled services, forms and references.

**STANDARD:** To ensure electrical power equipment is maintained in an operational condition per TM 9-6115-641-10.

**PERFORMANCE STEPS:**
1. Identify ELECTROCUTION HAZARD(S).
2. Identify FIRE/EXPLOSION HAZARD(S).
3. Identify CARBON MONOXIDE HAZARD(S).
4. Review equipment technical manuals.
5. Review ERO.
6. Don PPE.
7. Contain (Lockout/Tagout) hazardous energy.
8. Inspect equipment.
9. Service equipment.
10. Document maintenance performed and deficiencies/discrepancies noted.

**PREREQUISITE EVENTS:**
1141-ADMN-1002 1141-ADMN-1006

**RELATED EVENTS:**
1141-ADMN-1008 1141-ADMN-1007 1141-ADMN-1010
1141-ADMN-1011

**REFERENCES:**
1. SL-3-6115 Components List for Generator Set, Diesel Engine Driven, Skid Mounted
2. TM 4700-15/1H Ground Equipment Record Procedures (Jul 95)
3. TM 9-6115-641-10 Operator's Manual for Generator Set, Skid Mounted, Tactical Quiet, 5 kW, 60 and 400 Hz, MEP-802A and MEP-812A

**SUPPORT REQUIREMENTS:**

**EQUIPMENT:**
- Personal Protective Equipment (PPE)
- Tool Kit, Multi-Capable Maintainer [C7036]
- MEP-802A 5kW 60Hz Tactical Quiet Generator Set [B0077]

**MATERIAL:**
- NAVMC 10245 (Equipment Repair Order [ERO])
- NAVMC 10925 (Equipment Repair Order Shopping/Transaction List [EROSL])

- NAVMC 10560 (Worksheet for Preventive Maintenance and Technical Inspection for Engineer Equipment [LTI])
- Parts for scheduled services

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**1141-MANT-2237:** Perform Preventive Maintenance Checks and Services (PMCS) on a MEP-809A 200kW 50/60Hz Tactical Quiet Generator Set

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Electrician

**GRADES:** PVT, PFC, LCPL, CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** MOJT

**CONDITION:** Provided equipment, tools, parts for scheduled services, forms and references.

**STANDARD:** To ensure electrical power equipment is maintained in an operational condition per TM 11589A-OR.

**PERFORMANCE STEPS:**
1. Identify ELECTROCUTION HAZARD(S).
2. Identify FIRE/EXPLOSION HAZARD(S).
3. Identify CARBON MONOXIDE HAZARD(S).
4. Review equipment technical manuals.
5. Review ERO.
6. Don PPE.
7. Contain (Lockout/Tagout) hazardous energy.
8. Inspect equipment.
9. Service equipment.
10. Document maintenance performed and deficiencies/discrepancies noted.

**PREREQUISITE EVENTS:**
1141-ADMN-1006 1141-ADMN-1002

**RELATED EVENTS:**
1141-ADMN-1008 1141-ADMN-1011 1141-ADMN-1010
1141-ADMN-1007

**REFERENCES:**
1. SL-3-6115 Components List for Generator Set, Diesel Engine Driven, Skid Mounted
2. TM 11598A-OR Operator's Manual for Generator Set, Skid Mounted, Tactical Quiet, 200 kW, 50/60 Hz, MEP-809A
3. TM 4700-15/1H Ground Equipment Record Procedures (Jul 95)

**SUPPORT REQUIREMENTS:**

**EQUIPMENT:**
- Personal Protective Equipment (PPE)
- Tool Kit, Multi-Capable Maintainer [C7036]
- MEP-809A 200kW 50/60Hz Tactical Quiet Generator Set [B0083]

**MATERIAL:**
- NAVMC 10245 (Equipment Repair Order [ERO])
- NAVMC 10925 (Equipment Repair Order Shopping/Transaction List [EROSL])
- NAVMC 10560 (Worksheet for Preventive Maintenance and Technical Inspection for Engineer Equipment [LTI])
- Parts for scheduled services

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**1141-MANT-2254:** Perform Preventive Maintenance Checks and Services (PMCS) on a MMG-25 20kW, 60Hz Tactical Quiet Generator Set

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Electrician

**GRADES:** PVT, PFC, LCPL, CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** MOJT

**CONDITION:** Provided equipment, tools, parts for scheduled services, forms and references.

**STANDARD:** To ensure electrical power equipment is maintained in an operational condition per TM 11125A-OI.

**PERFORMANCE STEPS:**
1. Identify ELECTROCUTION HAZARD(S).
2. Identify FIRE/EXPLOSION HAZARD(S).
3. Identify CARBON MONOXIDE HAZARD(S).
4. Review equipment technical manuals.
5. Review ERO.
6. Don PPE.
7. Contain (Lockout/Tagout) hazardous energy.
8. Inspect equipment.
9. Service equipment.
10. Document maintenance performed and deficiencies/discrepancies noted.

**PREREQUISITE EVENTS:**
1141-ADMN-1006 1141-ADMN-1002

**RELATED EVENTS:**
1141-ADMN-1007 1141-ADMN-1010 1141-ADMN-1011
1141-ADMN-1008

**REFERENCES:**
1. MI 11125A-OI/2 Relocation of Ether Bottle for the Generator Set, 20kW MMG-25
2. MI 11125A-OI/3 Drilling of the Oil Drain Access Hole for the Generator Set, 20kW MMG-25
3. MI 11125A-OR Installation of Pulse Solar Charger (PSC) on Generator Set, 20kW MMG25
4. SI 11125A-OI/1 Warranty Procedures for Generator Set, 20kW MMG-25
5. SL-3-6115 Components List for Generator Set, Diesel Engine Driven, Skid Mounted

6. TM 11125A-OI Generator Set, Diesel Engine (Model MMG25)
7. TM 4700-15/1H Ground Equipment Record Procedures (Jul 95)

**SUPPORT REQUIREMENTS:**

**EQUIPMENT:**
- Personal Protective Equipment (PPE)
- Tool Kit, Multi-Capable Maintainer [C7036]
- MMG-25 20kW, 60Hz Tactical Quiet Generator Set [B0930]

**MATERIAL:**
- NAVMC 10245 (Equipment Repair Order [ERO])
- NAVMC 10925 (Equipment Repair Order Shopping/Transaction List [EROSL])
- NAVMC 10560 (Worksheet for Preventive Maintenance and Technical Inspection for Engineer Equipment [LTI])
- Parts for scheduled services

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**1141-MANT-2258:** Perform Preventive Maintenance Checks and Services (PMCS) on a MEP-815B 30kW, 400Hz Tactical Quiet Generator Set

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 24 months

**BILLETS:** Electrician

**GRADES:** PVT, PFC, LCPL, CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** MOJT

**CONDITION:** Provided equipment, tools, parts for scheduled services, forms and references.

**STANDARD:** To ensure electrical power equipment is maintained in an operational condition per TM 09249B/09246B-14.

**PERFORMANCE STEPS:**
1. Identify ELECTROCUTION HAZARD(S).
2. Identify FIRE/EXPLOSION HAZARD(S).
3. Identify CARBON MONOXIDE HAZARD(S).
4. Review equipment technical manuals.
5. Review ERO.
6. Don PPE.
7. Contain (Lockout/Tagout) hazardous energy.
8. Inspect equipment.
9. Service equipment.
10. Document maintenance performed and deficiencies/discrepancies noted.

**PREREQUISITE EVENTS:**
1141-ADMN-1002 1141-ADMN-1006

**RELATED EVENTS:**
1141-ADMN-1008 1141-ADMN-1007 1141-ADMN-1010
1141-ADMN-1011

**REFERENCES:**

1. MI 6115-34/30 Battery Charging Fuse Modification and Control Power Circuit to Tactical Quiet Generator Models MEP-805B, MEP-815B, MEP-806B, MEP-816B
2. MI 6115-OR/27A Trailer Mounting of Tactical Quiet Generators (TQG), 30 Kilowatt 60 Hertz (MEP-805A/B) or 30 Kilowatt 400 Hertz (MEP-815A/B) on M353 Trailer
3. MI 6115-OR/31 Installation of Pulse Solar Charger (PSC) on Tactical Quiet Generators (TQG), 30 Kilowatt 60 Hertz (MEP-805A/B) and 30 Kilowatt 400 Hertz (MEP-815A/B)
4. SL-3-6115 Components List for Generator Set, Diesel Engine Driven, Skid Mounted
5. TB 9-6115-671-24 Warranty Program for Generator Set, Tactical Quiet, 30kW, 50/60 and 400 Hz, MEP-805B and MEP-815B
6. TM 09249B/09246B-14 Operator, Unit, Direct Support and General Support Maintenance Manual for Generator Set, Skid Mounted, Tactical Quiet, 30 kW, MEP-805B/MEP-815B w/ Erratum
7. TM 09249B/09246B-24P/2 Unit, Direct Support and General Support Maintenance Repair Parts and Special Tools List for Generator Set, Skid Mounted, Tactical Quiet, 30kW, 50/60 and 400 Hz, MEP-805B and MEP-815B
8. TM 4700-15/1H Ground Equipment Record Procedures (Jul 95)
9. ULSS 004295-15B Marine Corps Family of Tactical Quiet Generators (TQGs)

**SUPPORT REQUIREMENTS:**

**EQUIPMENT:**
- Personal Protective Equipment (PPE)
- Tool Kit, Multi-Capable Maintainer [C7036]
- MEP-815B 30kW, 400Hz Tactical Quiet Generator Set [B0971]

**MATERIAL:**
- NAVMC 10245 (Equipment Repair Order [ERO])
- NAVMC 10925 (Equipment Repair Order Shopping/Transaction List [EROSL])
- NAVMC 10560 (Worksheet for Preventive Maintenance and Technical Inspection for Engineer Equipment [LTI])
- Parts for scheduled services

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**1141-MANT-2259:** Perform Preventive Maintenance Checks and Services (PMCS) on a MEP-531A 2kW 60Hz Tactical Quiet Generator Set

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Electrician

**GRADES:** PVT, PFC, LCPL, CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** MOJT

**CONDITION:** Provided equipment, tools, parts for scheduled services, forms and references.

**STANDARD:** To ensure electrical power equipment is maintained in an operational condition per TM 9-6115-673-13&P.

**PERFORMANCE STEPS:**
1. Identify ELECTROCUTION HAZARD(S).
2. Identify FIRE/EXPLOSION HAZARD(S).
3. Identify CARBON MONOXIDE HAZARD(S).
4. Review equipment technical manuals.
5. Review ERO.
6. Don PPE.
7. Contain (Lockout/Tagout) hazardous energy.
8. Inspect equipment.
9. Service equipment.
10. Document maintenance performed and deficiencies/discrepancies noted.

**PREREQUISITE EVENTS:**
1141-ADMN-1002 1141-ADMN-1006
**RELATED EVENTS:**
1141-ADMN-1008 1141-ADMN-1007 1141-ADMN-1010
1141-ADMN-1011

**REFERENCES:**
1. SI 11101A-OI/1 Warranty Procedures for MEP-531A 2kW Military Tactical Generator
2. SL-3-6115 Components List for Generator Set, Diesel Engine Driven, Skid Mounted
3. TM 4700-15/1H Ground Equipment Record Procedures (Jul 95)
4. TM 9-6115-673-13&P Operator's Unit and Direct Support Maintenance Manual Including Repair Parts and Special Tools List for 2kw Military Tactical Generator Sets, 120VAC, 60 Hz, MEP-531A and 28VDC, MEP-501A (Sep 02)

**SUPPORT REQUIREMENTS:**

**EQUIPMENT:**
- Personal Protective Equipment (PPE)
- Tool Kit, Multi-Capable Maintainer [C7036]
- MEP-531A 2kW 60Hz Tactical Quiet Generator Set [B0980]

**MATERIAL:**
- NAVMC 10245 (Equipment Repair Order [ERO])
- NAVMC 10925 (Equipment Repair Order Shopping/Transaction List [EROSL])
- NAVMC 10560 (Worksheet for Preventive Maintenance and Technical Inspection for Engineer Equipment [LTI])
- Parts for scheduled services

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**1141-MANT-2260:** Perform Preventive Maintenance Checks and Services (PMCS) on a MEP-816A 60kW, 400Hz Tactical Quiet Generator Set

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 24 months

**BILLETS:** Electrician

**GRADES:** PVT, PFC, LCPL, CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** MOJT

**CONDITION:** Provided equipment, tools, parts for scheduled services, forms and references.

**STANDARD:** To ensure electrical power equipment is maintained in an operational condition per TM 09244A/09245A-10/1.

**PERFORMANCE STEPS:**
1. Identify ELECTROCUTION HAZARD(S).
2. Identify FIRE/EXPLOSION HAZARD(S).
3. Identify CARBON MONOXIDE HAZARD(S).
4. Review equipment technical manuals.
5. Review ERO.
6. Don PPE.
7. Contain (Lockout/Tagout) hazardous energy.
8. Inspect equipment.
9. Service equipment.
10. Document maintenance performed and deficiencies/discrepancies noted.

**PREREQUISITE EVENTS:**
1141-ADMN-1002 1141-ADMN-1006

**RELATED EVENTS:**
1141-ADMN-1008 1141-ADMN-1007 1141-ADMN-1010
1141-ADMN-1011

**REFERENCES:**
1. LI 09244A/09245A-12 Lubrication Instruction for Generator Set, Skid Mounted, Tactical Quiet, 60kW, 50/60 and 400 Hz, MEP-806A and MEP-816A
2. MI 6115-25/28 In Line Fuse Addition to Tactical Quiet Generator, Models MEP-805A, 806A, 815A and 816A
3. MI 6115-OR/26A Trailer Mounting of Tactical Quiet Generators (TQG), 60 Kilowatt 60 Hertz (MEP-806A/B) or 60 Kilowatt 400 Hertz (MEP-816A/B) on M353 Trailer
4. MI 6115-OR/32 Installation of Pulse Solar Charger (PSC) on Tactical Quiet Generators (TQG), 60 Kilowatt 60 Hertz (MEP-806A/B) and 60 Kilowatt 400 Hertz (MEP-816A/B)
5. SI 09244A/09245A-24 Warranty Program for Generator Set, Tactical Quiet, 60kW, 50/60 and 400 Hz, MEP-806A and MEP-816A
6. SI 6115-12/4 Warranty Procedures for Tactical Quiet Generator Series (May 01)
7. SL-3-6115 Components List for Generator Set, Diesel Engine Driven, Skid Mounted
8. TB 9-6115-645-13 Operator, Unit and Direct Support Maintenance Manual for Winterization Kit Installed on Generator Set, Skid Mounted, Tactical Quiet, 60kW, 50/60 and 400 Hz, MEP-806A/MEP-816A
9. TM 09244A/09245A-10/1 Operator's Manual for Generator Set, Skid Mounted, Tactical Quiet, 60kw, MEP-806A/MEP-816A (Jul 93), w/Ch 1 (May 95) & Ch 2 (Oct 96)
10. TM 4700-15/1H Ground Equipment Record Procedures (Jul 95)
11. ULSS 004295-15B Marine Corps Family of Tactical Quiet Generators (TQGs)

**SUPPORT REQUIREMENTS:**

**EQUIPMENT:**
- Personal Protective Equipment (PPE)

- Tool Kit, Multi-Capable Maintainer [C7036]
- MEP-816A 60kW, 400Hz Tactical Quiet Generator Set [B1016]

**MATERIAL:**
- NAVMC 10245 (Equipment Repair Order [ERO])
- NAVMC 10925 (Equipment Repair Order Shopping/Transaction List [EROSL])
- NAVMC 10560 (Worksheet for Preventive Maintenance and Technical Inspection for Engineer Equipment [LTI])
- Parts for scheduled services

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**1141-MANT-2261:** Perform Preventive Maintenance Checks and Services (PMCS) on a MEP-816B 60kW, 400Hz Tactical Quiet Generator Set

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 24 months

**BILLETS:** Electrician

**GRADES:** PVT, PFC, LCPL, CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** MOJT

**CONDITION:** Provided equipment, tools, parts for scheduled services, forms and references.

**STANDARD:** To ensure electrical power equipment is maintained in an operational condition per TM 09244B/09245B-14/1.

**PERFORMANCE STEPS:**
1. Identify ELECTROCUTION HAZARD(S).
2. Identify FIRE/EXPLOSION HAZARD(S).
3. Identify CARBON MONOXIDE HAZARD(S).
4. Review equipment technical manuals.
5. Review ERO.
6. Don PPE.
7. Contain (Lockout/Tagout) hazardous energy.
8. Inspect equipment.
9. Service equipment.
10. Document maintenance performed and deficiencies/discrepancies noted.

**PREREQUISITE EVENTS:**
1141-ADMN-1006 1141-ADMN-1002

**RELATED EVENTS:**
1141-ADMN-1008 1141-ADMN-1011 1141-ADMN-1010
1141-ADMN-1007

**REFERENCES:**
1. MI 6115-34/30 Battery Charging Fuse Modification and Control Power Circuit to Tactical Quiet Generator Models MEP-805B, MEP-815B, MEP-806B, MEP-816B
2. MI 6115-OR/26A Trailer Mounting of Tactical Quiet Generators (TQG), 60 Kilowatt 60 Hertz (MEP-806A/B) or 60 Kilowatt 400 Hertz (MEP-816A/B) on M353 Trailer

3. MI 6115-OR/32 Installation of Pulse Solar Charger (PSC) on Tactical Quiet Generators (TQG), 60 Kilowatt 60 Hertz (MEP-806A/B) and 60 Kilowatt 400 Hertz (MEP-816A/B)
4. SL-3-6115 Components List for Generator Set, Diesel Engine Driven, Skid Mounted
5. TB 9-6115-672-24 Warranty Program for Generator Set, Tactical Quiet, 60kW, 50/60 and 400 Hz, MEP-806B and MEP-816B
6. TM 09244B/09245B-14/1 Operator, Unit, Direct Support and General Support Maintenance Manual for Generator Set, Skid Mounted, Tactical Quiet, 60kW, 50/60 and 400 Hz, MEP-806B and MEP-816B
7. TM 4700-15/1H Ground Equipment Record Procedures (Jul 95)
8. ULSS 004295-15B Marine Corps Family of Tactical Quiet Generators (TQGs)

**SUPPORT REQUIREMENTS:**

**EQUIPMENT:**
- Personal Protective Equipment (PPE)
- Tool Kit, Multi-Capable Maintainer [C7036]
- MEP-816B 60kW, 400Hz Tactical Quiet Generator Set [B1016]

**MATERIAL:**
- NAVMC 10245 (Equipment Repair Order [ERO])
- NAVMC 10925 (Equipment Repair Order Shopping/Transaction List [EROSL])
- NAVMC 10560 (Worksheet for Preventive Maintenance and Technical Inspection for Engineer Equipment [LTI])
- Parts for scheduled services

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**1141-MANT-2264:** Perform Preventive Maintenance Checks and Services (PMCS) on a MEP-007B 100kW, 50/60Hz Generator Set

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 24 months

**BILLETS:** Electrician

**GRADES:** PVT, PFC, LCPL, CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** MOJT

**CONDITION:** Provided equipment, tools, parts for scheduled services, forms and references.

**STANDARD:** To ensure electrical power equipment is maintained in an operational condition per TM 07464B-12.

**PERFORMANCE STEPS:**
1. Identify ELECTROCUTION HAZARD(S).
2. Identify FIRE/EXPLOSION HAZARD(S).
3. Identify CARBON MONOXIDE HAZARD(S).
4. Review equipment technical manuals.
5. Review ERO.
6. Don PPE.
7. Contain (Lockout/Tagout) hazardous energy.
8. Inspect equipment.

9. Service equipment.
10. Document maintenance performed and deficiencies/discrepancies noted.

**PREREQUISITE EVENTS:**
1141-ADMN-1002 1141-ADMN-1006

**RELATED EVENTS:**
1141-ADMN-1008 1141-ADMN-1007 1141-ADMN-1010
1141-ADMN-1011

**REFERENCES:**
1. LO 5-6115-600-12 Lubrication Order for Generator Set, Diesel Engine Driven, Tactical, Skid Mounted, 100kW, 50/60 Hz, MEP-007B
2. SL-3-07464 Components List for Generator Set, Diesel Engine Driven, Skid Mounted, MEP-007A and MEP-007B
3. SL-4-07464B Organizational, Intermediate (Field), (Direct Support and General Support), and Depot Maintenance Repair Parts and Special Tools List for Generator Set, Diesel Engine Driven, Tactical, Skid Mounted, 100 kW, MEP-007A w/ Ch 4 & Erratum
4. TM 07464B-12 Operator and Organizational Maintenance Manual for Generator Set, Diesel Engine Driven, Tactical, Skid Mounted, 100 kW, MEP-007B
5. TM 07464B-35 Intermediate (Field)(Direct and General Support) and Depot Level Maintenance Manual for Generator Set, Diesel Engine Driven, Tactical, Skid Mounted, 100kW, 50/60 Hz, MEP-007B
6. TM 4700-15/1H Ground Equipment Record Procedures (Jul 95)

**SUPPORT REQUIREMENTS:**

**EQUIPMENT:**
- Personal Protective Equipment (PPE)
- Tool Kit, Multi-Capable Maintainer [C7036]
- MEP-007B 100kW, 50/60Hz Generator Set [B1045]

**MATERIAL:**
- NAVMC 10245 (Equipment Repair Order [ERO])
- NAVMC 10925 (Equipment Repair Order Shopping/Transaction List [EROSL])
- NAVMC 10560 (Worksheet for Preventive Maintenance and Technical Inspection for Engineer Equipment [LTI])
- Parts for scheduled services

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**1141-MANT-2293:** Perform Preventive Maintenance Checks and Services (PMCS) on a Panel, Power Bus, Circuit Breaker, for the Field Food Service System

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 24 months

**BILLETS:** Electrician

**GRADES:** PVT, PFC, LCPL, CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** MOJT

**CONDITION:** Provided equipment, tools, parts for scheduled services, forms and references.

**STANDARD:** To ensure electrical power equipment is maintained in an operational condition per TM 10879A-12.

**PERFORMANCE STEPS:**
1. Identify ELECTROCUTION HAZARD(S).
2. Review equipment technical manuals.
3. Review ERO.
4. Don PPE.
5. Contain (Lockout/Tagout) hazardous energy.
6. Inspect equipment.
7. Service equipment.
8. Document maintenance performed and deficiencies/discrepancies noted.

**PREREQUISITE EVENTS:**
1141-ADMN-1006 1141-ADMN-1002

**RELATED EVENTS:**
1141-ADMN-1008 1141-ADMN-1010 1141-ADMN-1011
1141-ADMN-1007

**REFERENCES:**
1. SL-3-10879A SL-3 For Field Food Service System
2. TM 10879A-12 Field Food Service System Technical Manual (Commercial)
3. TM 4700-15/1H Ground Equipment Record Procedures (Jul 95)
4. ULSS 001302-15 Field Food Service System (FFSS) User Logistics Support Summary

**SUPPORT REQUIREMENTS:**

**EQUIPMENT:**
- Personal Protective Equipment (PPE)
- Tool Kit, Multi-Capable Maintainer [C7036]
- Panel, Power Bus, Circuit Breaker, for the Field Food Service System [C0200]

**MATERIAL:**
- NAVMC 10245 (Equipment Repair Order [ERO])
- NAVMC 10925 (Equipment Repair Order Shopping/Transaction List [EROSL])
- NAVMC 10560 (Worksheet for Preventive Maintenance and Technical Inspection for Engineer Equipment [LTI])

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**1141-MANT-2294:** Perform Preventive Maintenance Checks and Services (PMCS) on a Field Food Service System (FFSS) electrical system

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 24 months

**BILLETS:** Electrician

**GRADES:** PVT, PFC, LCPL, CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** MOJT

**CONDITION:** Provided equipment, tools, parts for scheduled services, forms and references.

**STANDARD:** To ensure electrical power equipment is maintained in an operational condition per TM 10879A-12.

**PERFORMANCE STEPS:**
1. Identify ELECTROCUTION HAZARD(S).
2. Review equipment technical manuals.
3. Review ERO.
4. Don PPE.
5. Inspect equipment.
6. Service equipment.
7. Document maintenance performed and deficiencies/discrepancies noted.

**PREREQUISITE EVENTS:**
1141-ADMN-1002 1141-ADMN-1006

**RELATED EVENTS:**
1141-ADMN-1007 1141-ADMN-1011 1141-ADMN-1010
1141-ADMN-1008

**REFERENCES:**
1. SL-3-10879A SL-3 For Field Food Service System
2. TM 10879A-12 Field Food Service System Technical Manual (Commercial)
3. TM 4700-15/1H Ground Equipment Record Procedures (Jul 95)
4. ULSS 001302-15 Field Food Service System (FFSS) User Logistics Support Summary

**SUPPORT REQUIREMENTS:**

**EQUIPMENT:**
- Personal Protective Equipment (PPE)
- Tool Kit, Multi-Capable Maintainer [C7036]
- Field Food Service System (FFSS) [C5810]

**MATERIAL:**
- NAVMC 10245 (Equipment Repair Order [ERO])
- NAVMC 10925 (Equipment Repair Order Shopping/Transaction List [EROSL])
- NAVMC 10560 (Worksheet for Preventive Maintenance and Technical Inspection for Engineer Equipment [LTI])
- Parts for scheduled services

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**1141-MANT-2332:** Diagnose a Containerized Batch Laundry (CBL) Unit electrical malfunction

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 24 months

**BILLETS:** Electrician

**GRADES:** PVT, PFC, LCPL, CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** MOJT

**CONDITION:** Provided a Limited Technical Inspection (LTI) on inoperable equipment, the inoperable equipment, a 120/208VAC 60Hz electrical power source, tools, forms and references.

**STANDARD:** To ensure equipment faults are identified in order to initiate corrective action(s) per the references.

**PERFORMANCE STEPS:**
1. Identify ELECTROCUTION HAZARD(S).
2. Identify GRAYWATER HAZARD(S).
3. Review LTI.
4. Review equipment technical manuals.
5. Don PPE.
6. Ensure equipment is grounded.
7. Ensure any stored/hazardous energy is dissipated/controlled (Lockout/Tagout).
8. Check valves/switches/gauges for correct settings.
9. Isolate faulty component(s).
10. Determine if component fault was caused by a defect elsewhere.
11. Determine echelon(s) of maintenance.
12. Document findings (complete LTI/initiate ERO).
13. Initiate EROSL (if required).

**PREREQUISITE EVENTS:**
1141-ADMN-1006 1141-ADMN-1002

**RELATED EVENTS:**
1141-ADMN-1008 1141-ADMN-1011 1141-ADMN-1010

**REFERENCES:**
1. TM 10-4630-206-12&P Operator and Unit Maintenance Manual (Including Repair Parts and Special Tools List) for Sewage Ejection Pump (SEP)
2. TM 10209-10/1 Use and Care of Hand Tools & Measuring Tools
3. TM 11413A-OI/1 Operator/Maintenance Manual Instructions with Repair Parts and Special Tools List (RPSTL) for Containerized Batch Laundry
4. TM 4700-15/1H Ground Equipment Record Procedures (Jul 95)
5. UM-4790-5 MIMMS-AIS Field Maintenance Procedures

**SUPPORT REQUIREMENTS:**

**EQUIPMENT:**
- Personal Protective Equipment (PPE)
- Tool Kit, Multi-Capable Maintainer [C7036]
- Faulty Containerized Batch Laundry (CBL) Unit [B0066] or components

**MATERIAL:**
- NAVMC 10245 (Equipment Repair Order [ERO])
- NAVMC 10925 (Equipment Repair Order Shopping/Transaction List [EROSL])
- NAVMC 10560 (Worksheet for Preventive Maintenance and Technical Inspection for Engineer Equipment [LTI])

**OTHER SUPPORT REQUIREMENTS:** 120/208VAC 60Hz electrical power source (normally a 100kW MEP-807A Tactical Quiet Generator)

**MISCELLANEOUS:**

**ADMINISTRATIVE INSTRUCTIONS:** Assistance from an Engineer Equipment Electrical Systems Technician (MOS 1142) may be required to fully diagnose an electrical system malfunction.

**1141-MANT-2394:** Diagnose a Field Food Service System (FFSS) electrical malfunction

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 24 months

**BILLETS:** Electrician

**GRADES:** PVT, PFC, LCPL, CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** MOJT

**CONDITION:** Provided a Limited Technical Inspection (LTI) on inoperable equipment, the inoperable equipment, a 120/208VAC 50/60Hz electrical power source, tools, forms and references.

**STANDARD:** To ensure equipment faults are identified in order to initiate corrective action(s) per the references.

**PERFORMANCE STEPS:**
1. Review LTI.
2. Review equipment technical manuals.
3. Don PPE.
4. Ensure any stored/hazardous energy is dissipated/controlled (Lockout/Tagout).
5. Check valves/switches/gauges for correct settings.
6. Isolate faulty component(s).
7. Determine if component fault was caused by a defect elsewhere.
8. Determine echelon(s) of maintenance.
9. Document findings (complete LTI/initiate ERO).
10. Initiate EROSL (if required).

**PREREQUISITE EVENTS:**
1141-ADMN-1006 1141-ADMN-1002

**RELATED EVENTS:**
1141-ADMN-1008 1141-MANT-2294 1141-ADMN-1011
1141-ADMN-1010

**REFERENCES:**
1. TM 10209-10/1 Use and Care of Hand Tools & Measuring Tools
2. TM 10879A-12 Field Food Service System Technical Manual (Commercial)
3. TM 4700-15/1H Ground Equipment Record Procedures (Jul 95)
4. UM-4790-5 MIMMS-AIS Field Maintenance Procedures

**SUPPORT REQUIREMENTS:**

**EQUIPMENT:**
- Personal Protective Equipment (PPE)
- Tool Kit, Multi-Capable Maintainer [C7036]
- Faulty Field Food Service System (FFSS) [C5810] or components

**MATERIAL:**
- NAVMC 10245 (Equipment Repair Order [ERO])
- NAVMC 10925 (Equipment Repair Order Shopping/Transaction List [EROSL])

- NAVMC 10560 (Worksheet for Preventive Maintenance and Technical Inspection for Engineer Equipment [LTI])

**OTHER SUPPORT REQUIREMENTS:** 120/208VAC 50/60Hz electrical power source (normally two 100kW MEP-807A or three 60kW MEP-806A or MEP-806B Tactical Quiet Generators)

**MISCELLANEOUS:**

**ADMINISTRATIVE INSTRUCTIONS:** Assistance from an Engineer Equipment Electrical Systems Technician (MOS 1142), Water Support Technician (MOS 1171) and/or Food Service Specialist (MOS 3381) may be required to fully diagnose any electrical malfunction.

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**1141-MANT-2402:** Repair a general supply equipment electrical system

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Engineer Equipment Electrical Systems Technician

**GRADES:** PVT, PFC, LCPL, CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** MOJT

**CONDITION:** Provided an Equipment Repair Order (ERO) on degraded/deadlined equipment, the degraded/deadlined equipment, repair parts from ERO layette, tools, forms and references.

**STANDARD:** To ensure equipment is returned to a functional state to support unit operations in accordance with references.

**PERFORMANCE STEPS:**
1. Review LTI/ERO.
2. Inventory parts in ERO layette.
3. Review equipment technical manuals.
4. Don PPE.
5. Remove faulty part(s).
6. Clean area for new part(s).
7. Attach new part(s).
8. Determine if system fault was caused by a defect elsewhere.
9. Test repairs.
10. Document repairs.

**PREREQUISITE EVENTS:** 1142-ADMN-1002

**REFERENCES:**
1. MCO P4790.2C MIMMS Field Procedures Manual (JUL 94)
2. TM 10209-10/1 Use and Care of Hand Tools & Measuring Tools
3. TM 4700-15/1H Ground Equipment Record Procedures (Jul 95)
4. UM-4790-5 MIMMS-AIS Field Maintenance Procedures
5. Appropriate Technical Manuals

**SUPPORT REQUIREMENTS:**

**EQUIPMENT:** Personal Protective Equipment (PPE); Test Measurement and Diagnostic Equipment (TMDE); General Mechanic's Tool Set; Electrical Equipment Repair Tool Set; piece of general supply equipment requiring electrical system repair

**MATERIAL:** Equipment Repair Order (ERO) (NAVMC 10245); Worksheet for Preventive Maintenance and Technical Inspection for Engineer Equipment (LTI) (NAVMC 10560); Equipment Repair Order Shopping/Transaction List (EROSL) (NAVMC 10925); repair parts

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**1141-XENG-2501:** Determine electrical support requirements

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Electrician

**GRADES:** CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Given a warning order, area map, equipment, materials, forms and references.

**STANDARD:** To ensure proper utilities planning factors support the commander's intent and mission requirements, per the references.

**PERFORMANCE STEPS:**
1. Review warning order and references.
2. Plan movement to possible electrical support site(s).
3. Move to a possible electrical support site.
4. Complete Identification Data on Electricity Smartcard.
5. Record site conditions on Electricity Smartcard.
6. Sketch proposed site layout on Electricity Smartcard.
7. Photograph site.
8. Verify completeness of smartcards.
9. Move to next possible source (repeating steps 3 through 9 as required).
10. Return from reconnaissance.
11. Identify equipment/personnel requiring electrical support.
12. Determine support requirements.
13. Submit initial list of estimated electrical equipment/personnel required to support requirements of warning order.

**RELATED EVENTS:**
1141-ADMN-2022 1141-XENG-2623 1141-ADMN-2031

**REFERENCES:**
1. FM 5-424 Theater of Operations Electrical Systems (Jun 97)
2. MCRP 3-17B Engineer Forms and Reports
3. MCWP 3-17.4 Engineer Reconnaissance
4. NEC (NFPA 70) National Electrical Code - by National Fire Protection Association
5. TM 11275-15/3D Principal Technical Characteristics of U.S. Marine Corps

Engineer Equipment (May 02)
6. TM 12359A-OD/B Principal Technical Characteristics of Expeditionary Power Systems Equipment (Aug 2008)
7. TM 2000-15/4 Power System Reference Manual (Jul 68)
8. Appropriate Technical Manuals

**SUPPORT REQUIREMENTS:**

**EQUIPMENT:**
- Camera
- Calculator
- Multimeter
- Tape measure

**MATERIAL:**
- Area topographical map(s)
- Electricity Smartcard (Figure C-4 of MCWP 3-17.4)
- Pens/pencils

**OTHER SUPPORT REQUIREMENTS:** Transportation (by vehicle or aircraft) will be required for access to prospective electrical support site(s).

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**1141-XENG-2502:** Identify electric motor/controller requirements

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Electrician

**GRADES:** CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Provided a requirement to convert electrical energy into mechanical energy, resources, and references.

**STANDARD:** To ensure positive control of electric motor is established in accordance with equipment manual(s).

**PERFORMANCE STEPS:**
1. Determine torque requirements.
2. Determine speed requirements.
3. Determine horse power requirements.
4. Identify motor type required (single-phase, three-phase, split phase, capacitor start).
5. Determine controls needed for application.
6. Identify type of controller(s) required.
7. Identify over current protection requirements.
8. Document determinations and findings.

**RELATED EVENTS:**

| | | |
|---|---|---|
| 1141-ADMN-1001 | 1141-XENG-1692 | 1141-XENG-2623 |
| 1141-XENG-2561 | 1141-XENG-1693 | |

**REFERENCES:**
1. FM 5-424 Theater of Operations Electrical Systems (Jun 97)
2. TC 9-60 COMMUNICATIONS-ELECTRONICS FUNDAMENTALS, BASIC PRINCIPLES OF ALTERNATING CURRENT AND DIRECT CURRENT
3. TM 2000-15/4 Power System Reference Manual (Jul 68)
4. TM 9406-15 Grounding Procedures for Electromagnetic Interference Control and Safety (Aug 91)
5. Appropriate Technical Manuals

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**1141-XENG-2521:** Develop a field electrical support plan

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Electrician

**GRADES:** CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Given a warning order requiring a base camp(s), area map(s), area reconnaissance report(s), any environmental impact report(s), camp layout(s) and references.

**STANDARD:** To ensure proper utilities planning factors support the commander's intent and mission requirements, per the references.

**PERFORMANCE STEPS:**
1. Review warning order, map(s), reconnaissance report(s), camp layout(s), and references.
2. Identify equipment/personnel requiring electrical support.
3. Determine electrical power generation/distribution equipment requirements, selecting equipment sites.
4. Determine environmental impacts.
5. Plot generation sites on camp layout(s), making provision for traffic.
6. Identify potential impact of weather/climate on electrical power generation/distribution operations.
7. Determine risks, conducting operational risk assessments.
8. Identify "Off Limit" areas (i.e., generator sites, hazardous material sites, etc.).
9. Determine number and type of warning signs required.
10. Schedule Preventive Maintenance Checks and Services (PMCS).
11. Determine POL requirements.
12. Determine camouflage, concealment, and decoy requirements.
13. Determine security requirements.
14. Estimate man-hour requirements, determining number of electricians required to support the mission.
15. Establish operator schedules.
16. Estimate logistical support (truck, forklift, etc.) required.
17. Establish Bill of Materials (BOM) including security, camouflage, environmental, and safety items.
18. Generate work request(s) for any required construction.
19. Establish a Course of Action (COA).
20. Record requirements for input into Annex D of the Operation Order.
21. Brief electrical support plan (if required).

**PREREQUISITE EVENTS:** 1141-XENG-2501

**RELATED EVENTS:**
1141-ADMN-1006 1141-XENG-2699 1141-XENG-1618
1141-XENG-1601

**REFERENCES:**
1. FM 20-3 Camouflage
2. FM 5-424 Theater of Operations Electrical Systems (Jun 97)
3. MCRP 3-17B Engineer Forms and Reports
4. MCRP 4-11B Environmental Considerations in Military Operations (Jun 00)
5. MCWP 3-17 Engineer Operations
6. MCWP 3-17.4 Engineer Reconnaissance
7. MCWP 3-35.6 Desert Operations
8. MCWP 3-41.1 Rear Area Operations
9. MCWP 4-11 Tactical Level Logistics
10. MCWP 4-11.5 SeaBee Operations in the MAGTF
11. MCWP 5-1 Marine Corps Planning Process
12. TC 3-34.489 The Soldier and the Environment
13. TM 12359A-OD/B Principal Technical Characteristics of Expeditionary Power Systems Equipment (Aug 2008)
14. Appropriate Technical Manuals

**SUPPORT REQUIREMENTS:**

**MATERIAL:**
- Area topographical map(s)
- Electric Smartcards (Figure C-4 of MCWP 3-17.4)
- Area reconnaissance report(s)
- Environmental impact report(s) (if any)
- Camp layout(s)

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**1141-XENG-2561:** Design an interior electrical wiring system

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Electrician

**GRADES:** CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Provided construction plans for a building, a list of electrical fixtures/appliances to be installed, local code requirements, and references.

**STANDARD:** To ensure proper utilities planning factors support mission requirements, per the references.

**PERFORMANCE STEPS:**
1. Review construction plans, local code, and references.
2. Review list of electrical fixtures/appliances to be installed.
3. Calculate general lighting load.
4. Identify power requirements.
5. Determine code requirements.

6. Size branch circuits.
7. Size over current protection devices.
8. Plot electrical symbols on construction plans.
9. Ensure interior electrical wiring system plan conforms to references and the building's requirements.
10. Establish a Bill of Materials (BOM), including safety items.
11. Establish a Course of Action (COA).

**REFERENCES:**
1. FM 5-424 Theater of Operations Electrical Systems (Jun 97)
2. FM 5-553 General Drafting
3. NEC (NFPA 70) National Electrical Code - by National Fire Protection Association
4. TM 5-704 Construction Print Reading in the Field

**SUPPORT REQUIREMENTS:**

**MATERIAL:** Construction plans.

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**1141-XENG-2602:** Construct a field wiring harness

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Electrician

**GRADES:** PVT, PFC, LCPL, CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** MOJT

**CONDITION:** Provided a field electrical distribution plan, Lineman's Tool Kit, a bill of materials (BOM), and the references.

**STANDARD:** To ensure proper fabrication of electrical power equipment to provide combat service support in accordance with the distribution plan, per the references.

**PERFORMANCE STEPS:**
1. Review references.
2. Review electrical distribution plan.
3. Gather required materials.
4. Assemble wiring harness, testing connections.
5. Test wiring harness.

**REFERENCES:**
1. FM 20-31 Electric Power Generation in the Field
2. FM 5-424 Theater of Operations Electrical Systems (Jun 97)
3. SL-3-09049A Components List for Field Wiring Harness, Model MLK-0000 (Jan 92)
4. TM 09049a-12&P/1 Operation and Maintenance Including Components List and Repair Parts List for Field Wiring Harness, Model MLK-0000 (Sep89), w/ch 1 (Oct 92), Ch 2 (Aug 94), & Ch 3 (Apr 95)
5. National Electrical Code

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**1141-XENG-2603:** Splice a field wire connection

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Electrician

**GRADES:** PVT, PFC, LCPL, CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** MOJT

**CONDITION:** Provided wire, tools and reference.

**STANDARD:** To ensure electrical continuity is established with tensile strength required by FM 5-424, related to the application.

**PERFORMANCE STEPS:**
1. Identify ELECTROCUTION HAZARD(S).
2. Review references.
3. Determine type of splice required.
4. Don PPE.
5. Ensure any stored/hazardous energy is dissipated/controlled (Lockout/Tagout).
6. Strip wire.
7. Construct splice.
8. Insulate bare wires.
9. Test splice.

**PREREQUISITE EVENTS:** 1141-ADMN-1002

**REFERENCES:**
1. FM 5-424 Theater of Operations Electrical Systems (Jun 97)
2. TB SIG 222 Solder and Soldering

**SUPPORT REQUIREMENTS:**

**EQUIPMENT:**
- Personal Protective Equipment (PPE)
- Tool Kit, Lineman's Electrician (TK-1141) [B0062]

**MATERIAL:** Wire

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**1141-XENG-2621:** Direct field electrical power generator/distribution system installation

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Electrician

**GRADES:** CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** MOJT

**CONDITION:** Given an operation order, camp layout, equipment, personnel, and reference.

**STANDARD:** To ensure required utilities services are established, resulting in effective service support to the unit, per the references.

**PERFORMANCE STEPS:**
1. Determine/review operation order and camp layout.
2. Determine/review safety requirements.
3. Review environmental requirements.
4. Brief installation crew.
5. Supervise electrical power generation/distribution system installation.
6. Inspect field electrical power generation/distribution system.
7. Correct discrepancies.
8. Brief recovery crew.
9. Supervise electrical power generation/distribution system recovery.

**REFERENCES:**
1. TM 9406-15 Grounding Procedures for Electromagnetic Interference Control and Safety (Aug 91)

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**1141-XENG-2622:** Monitor ground test set measurements

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Electrician

**GRADES:** CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** MOJT

**CONDITION:** Provided a working ground test set, a grounding system, and references.

**STANDARD:** To ensure safety of equipment and personnel per the references.

**PERFORMANCE STEPS:**
1. Review references.
2. Determine grounding electrode/system resistance (ohms) to ground requirements for electrical equipment/system.
3. Review ground test set measurements.
4. Identify potential impact of weather (humidity/temperature) on grounding system.
5. Direct improvements/upgrades to grounding system as necessary.

**REFERENCES:**
1. FM 20-31 Electric Power Generation in the Field
2. National Electrical Code

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**1141-XENG-2623:** Balance an electrical load

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**DESCRIPTION:** An electrician should be able to balance an electrical system to avoid damaging equipment. Electrical power generation and distribution system must be balanced to within 10% of connected load.

**BILLETS:** Electrician

**GRADES:** CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Provided a field electrical power generation and distribution system, system plans, a requirement for additional load(s) and references.

**STANDARD:** To ensure technician can properly distribute electrical power in order to support utility demand per the references. So electrical power generation and distribution system is balanced to within 10% of connected load.

**PERFORMANCE STEPS:**
1. Review system plan.
2. Examine distribution system to determine power consumption of phases and components.
3. Ensure power is measure accurately on all phases.
4. Ensure calculation of percent of unbalance is correct.
5. Examine plan for redistribution of load(s).
6. Ensure power is measured accurately on all phases after redistribution.
7. Ensure calculation of percent of balance is correct after redistribution.

**REFERENCES:**
1. FM 5-424 Theater of Operations Electrical Systems (Jun 97)
2. NEC (NFPA 70) National Electrical Code - by National Fire Protection Association
3. TM 12359A-OD/B Principal Technical Characteristics of Expeditionary Power Systems Equipment (Aug 2008)

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**1141-XENG-2694:** Climb a pole/tree

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Electrician

**GRADES:** PVT, PFC, LCPL, CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** MOJT

**CONDITION:** Given a requirement to establish an overhead electrical power distribution system, a lineman's tool kit, and safety equipment.

**STANDARD:** To ensure electrician can operate essential climbing equipment to support overhead power system installation in accordance with mission requirements.

**PERFORMANCE STEPS:**
1. Inspect pole/tree.
2. Put on required equipment.
3. Climb pole/tree.
4. Belt in.
5. Perform required work (circumnavigating pole/tree as necessary).

6. Unbelt.
7. Descend pole/tree.

**RELATED EVENTS:**
1141-ADMN-2032 1141-XENG-2695

**REFERENCES:**
1. FM 20-31 Electric Power Generation in the Field
2. FM 5-424 Theater of Operations Electrical Systems (Jun 97)
3. SL-3-01204A Components List for Tool Kit, Lineman's (Mar 98), w/Ch 1 (Apr99)

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**1141-XENG-2695:** Construct an overhead electric power distribution system

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Electrician

**GRADES:** PVT, PFC, LCPL, CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** MOJT

**CONDITION:** Provided an overhead electric power distribution system plan, equipment, materials, Lineman's Tool Kit, and references.

**STANDARD:** To ensure proper installation of electrical power equipment to provide uninterrupted combat service support in accordance with the distribution plan, per the references.

**PERFORMANCE STEPS:**
1. Review references.
2. Review field electrical distribution plan.
3. Assist in the installation of the distribution system.
4. Examine field electrical distribution system to identify problem areas.
5. Ensure all safety rules are observed, violations corrected, and unsafe situations identified and corrected.
6. Post safety/warning signs.
7. Test system.

**PREREQUISITE EVENTS:** 1141-XENG-2694

**RELATED EVENTS:**
1141-XENG-2696 1141-XENG-2602 1141-XENG-2603

**REFERENCES:**
1. FM 20-31 Electric Power Generation in the Field
2. FM 5-422 Engineer Prime Power Operations
3. FM 5-424 Theater of Operations Electrical Systems (Jun 97)
4. TM 5-765 Electric Power Transmission and Distribution

**SUPPORT REQUIREMENTS:**

**EQUIPMENT:** Generators; Lineman's Tool Kit

**MATERIAL:** Poles; Wire

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**1141-XENG-2696:** Construct an underground electric power distribution system

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Electrician

**GRADES:** PVT, PFC, LCPL, CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** MOJT

**CONDITION:** Provided an underground field electric power distribution system plan, equipment, materials, Lineman's Tool Kit, and references.

**STANDARD:** To ensure proper installation of electrical power equipment to provide uninterrupted combat service support in accordance with the distribution plan, per the references.

**PERFORMANCE STEPS:**
1. Review references.
2. Review field electrical distribution plan.
3. Assist in installation of the distribution system.
4. Examine field electrical distribution system to identify problem areas.
5. Ensure all safety rules are observed, violations corrected, and unsafe situations identified and corrected.
6. Post safety/warning signs.
7. Test system.

**REFERENCES:**
1. FM 20-31 Electric Power Generation in the Field
2. FM 5-424 Theater of Operations Electrical Systems (Jun 97)
3. TM 5-765 Electric Power Transmission and Distribution

**SUPPORT REQUIREMENTS:**

**EQUIPMENT:** Backhoe

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**1141-XENG-2718:** Operate an Integrated Trailer/ECU/Generator (ITEG)

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Electrician

**GRADES:** PVT, PFC, LCPL, CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** MOJT

**CONDITION:** Provided equipment, forms, and references.

**STANDARD:** To ensure safe operation of equipment in support of mission requirements and commanders' intent in accordance with per TM 11490A-OR.

**PERFORMANCE STEPS:**
1. Identify ELECTROCUTION HAZARD(S).
2. Identify FIRE/EXPLOSION HAZARD(S).
3. Identify CARBON MONOXIDE HAZARD(S).
4. Review references.
5. Assess operational risk.
6. Don PPE.
7. Unpack ITEG.
8. Place applicable environmental safeguards in place.
9. Set up ITEG.
10. Post safety/warning signs.
11. Ensure equipment is grounded.
12. Perform before operation checks.
13. Start generator.
14. Contact load.
15. Perform during operation checks/services.
16. Maintain equipment logs.
17. Shut down equipment per operational situation.
18. Perform after operation checks.
19. Document equipment operation.
20. Pack out equipment for movement/retrograde.

**PREREQUISITE EVENTS:** 1141-ADMN-1001

**RELATED EVENTS:**
1141-MANT-2218 1141-ADMN-1009

**REFERENCES:**
1. FM 5-424 Theater of Operations Electrical Systems (Jun 97)
2. SL-3-11490A Components List for Integrated Trailer, Environmental Control Unit, Generator (ITEG)
3. TM 11490A-OR Operation Manual with Repair Parts List, Integrated Trailer-ECU-Generator (ITEG)
4. TM 4700-15/1H Ground Equipment Record Procedures (Jul 95)

**SUPPORT REQUIREMENTS:**

**EQUIPMENT:**
- Personal Protective Equipment (PPE)
- Integrated Trailer, Environmental Control Unit, Generator (ITEG) [B0018]

**MATERIAL:**
- NAVMC 10524 (Consolidated Engineer Equipment Operation Log and Service Record)
- Fuel

**MISCELLANEOUS:**

**ADMINISTRATIVE INSTRUCTIONS:** All operators of the Integrated Trailer, Environmental Control Unit, Generator (ITEG) [B0018] will need to be licensed through an authorized licensing program in the Total Force.

**SPECIAL PERSONNEL CERTS:** Operators must be licensed to operate an Integrated Trailer, Environmental Control Unit, Generator (ITEG) [B0018].

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**1141-XENG-2721:** Direct field electrical power generation/distribution system operation

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Electrician

**GRADES:** CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** MOJT

**CONDITION:** Given an Operation Order, camp layout, electrical power generation/distribution system, operators, and references.

**STANDARD:** To ensure required utilities services are maintained, resulting in effective service support to the unit, per the references.

**PERFORMANCE STEPS:**
1. Review Operation Order and camp layout.
2. Inspect installed electrical power generation/distribution system.
3. Review environmental concerns.
4. Review safety concerns.
5. Establish operator schedule.
6. Brief personnel.
7. Monitor operation of equipment.
8. Brief personnel.
9. Monitor operation of equipment.
10. Ensure records/reports are undated/completed.

**REFERENCES:**
1. FM 5-422 Engineer Prime Power Operations
2. SL-3-09124a/09125A/09127A Components List for Power Distribution System, Models PD-100, PD-30, & PD-015 (Dec 95), w/Ch 1 (Jul 99)
3. SL-4-09124a/09125A/09127A Repair Parts for the Distribution System, Models 100kw, 030kw, & 015kw (Dec 94), w/Ch 1 (Jan96) & Ch 2 (Aug 96)
4. TM 09124a/09125a/09127-14/1 Operation and Maintenance for the Power Distribution System (PDIS), Models 100kw, 030kw, & 15kw (Mar00) Supersedes TM 08712A-14/1 (May98)
5. TM 9406-15 Grounding Procedures for Electromagnetic Interference Control and Safety (Aug 91)
6. UNIT SOP Unit's Standing Operating Procedures

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**1141-XENG-2754:** Operate a MMG-25 20kW 60Hz Generator Set

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Electrician

**GRADES:** PVT, PFC, LCPL, CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** MOJT

**CONDITION:** Provided a generator set, mechanic's tool box, and reference.

**STANDARD:** To ensure safe operation of equipment in support of mission requirements and commanders' intent per the reference.

**PERFORMANCE STEPS:**
1. Review appropriate section of the reference.
2. Place applicable environmental materials in place.
3. Set up generator set.
4. Perform before operations checks.
5. Ensure all power cables are properly installed.
6. Start generator set.
7. Perform generator set operator maintenance.
8. Shut down generator set.
9. Perform after operation inspection.

**REFERENCES:**
1. SL-3-07464A Components List for Generator Set, Diesel Engine Driven, Skid Mounted, MEP-007A/MEP-007B (Sep 91), w/Ch 1 (Aug 94), Ch 2 (Oct 97), & Ch 3 (Jan 98)
2. SL-4-07464A Organizational, Intermediate (Field), (Direct Support and General Support), and Depot Maintenance Repair Parts and Special Tools List for Generator Set, Diesel Engine Driven, Tactical, Skid Mounted, 100 kW, MEP-007B w/ Ch 4 & Erratum
3. TM 07464A-12 Generator Set, MEP-007A
4. TM 9-6115-646-14&P Operator, Unit, Direct Support and General Support Maintenance Manual (Including Repair Parts and Special Tools List) for Power Unit, PU-495A/G or PU-495B/G with MEP-007a or MEP-007B (May 90), w/ Ch 1 (May 97)

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**1141-XENG-2758:** Operate a MEP-815B 30kW 400Hz Tactical Quiet Generator Set

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Electrician

**GRADES:** PVT, PFC, LCPL, CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** MOJT

**CONDITION:** Provided an established generator site, with electrical support plan, forms, and references.

**STANDARD:** To ensure safe operation of equipment in support of mission requirements and commanders' intent per TM 09249B/09246B-14.

**PERFORMANCE STEPS:**
1. Identify ELECTROCUTION HAZARD(S).
2. Identify FIRE/EXPLOSION HAZARD(S).
3. Identify CARBON MONOXIDE HAZARD(S).
4. Review electrical support plan.
5. Review references.

6. Reassess operational risk, ensuring warning signs are posted.
7. Don PPE.
8. Ensure equipment is grounded.
9. Perform before operation checks, including all electrical power cable connections.
10. Start up generator.
11. Check switches/gauges for correct settings.
12. Contact load.
13. Perform during operation checks/services.
14. Maintain equipment logs.
15. Shut down equipment per operational situation.
16. Perform after operation checks.
17. Document equipment operation.
18. Pack out equipment for movement/retrograde.

**PREREQUISITE EVENTS:** 1141-ADMN-1001

**RELATED EVENTS:**
1141-MANT-2258 1141-ADMN-1009

**REFERENCES:**
1. TM 09249B/09246B-14 Operator, Unit, Direct Support and General Support Maintenance Manual for Generator Set, Skid Mounted, Tactical Quiet, 30 kW, MEP-805B/MEP-815B w/ Erratum
2. TM 4700-15/1H Ground Equipment Record Procedures (Jul 95)

**SUPPORT REQUIREMENTS:**

**EQUIPMENT:**
- Personal Protective Equipment (PPE)
- MEP-815B 30kW 400Hz Tactical Quiet Generator Set [B0971]

**MATERIAL:**
- Electrical support plan
- NAVMC 10524 (Consolidated Engineer Equipment Operation Log and Service Record)
- Fuel

**MISCELLANEOUS:**

**ADMINISTRATIVE INSTRUCTIONS:** Graduates of the Basic Electrician Course (CID: M0311B2) ARE NOT licensed operators of the MEP-815B 30kW 400Hz Tactical Quiet Generator Set [B0971]. If required, they will need to be licensed through an authorized licensing program in the Total Force.

**SPECIAL PERSONNEL CERTS:** Only Electricians (MOS 1141) will be licensed to operate a MEP-815B 30kW 400Hz Tactical Quiet Generator Set [B0971].

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**1141-XENG-2759:** Operate a MEP-531A 2kW 60Hz Generator Set

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Electrician

**GRADES:** PVT, PFC, LCPL, CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** MOJT

**CONDITION:** Provided tools and reference.

**STANDARD:** To ensure safe operation of equipment in support of mission requirements and commanders' intent per the generator's operator manual.

**PERFORMANCE STEPS:**
1. Review equipment technical manual.
2. Set up generator set.
3. Perform before operation checks.
4. Ensure all power cables are installed.
5. Start generator set.
6. Perform during operations checks.
7. Shut down generator set.
8. Perform after operations checks.

**REFERENCES:**
1. TM 9-6115-662-13&P Operator, Unit, and Direct Support Maintenance Manual (Including Repair Parts and Special Tools List) for Power Plant, Diesel Engine Driven, Trailer Mounted, 30kw (Oct 93), w/Ch 1 (Nov 93), Ch 2 (Sep 94), Ch 3 (Dec 95) & Ch 4 (May 96)

**SUPPORT REQUIREMENTS:**

**EQUIPMENT:** MEP-531A 2kW 60Hz Generator Set

**MISCELLANEOUS:**

**ADMINISTRATIVE INSTRUCTIONS:** Graduates of the Basic Electrician Course (CID: M0311B2) are licensed operators of the MEP-531A 2kW 60Hz Generator Set. All other operators will need to be licensed through an authorized licensing program in the Total Force.

**SPECIAL PERSONNEL CERTS:** Operator must be licensed to operate the MEP-531A 2kW 60Hz Generator Set.

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**1141-XENG-2760:** Operate a MEP-816A 60kW 400Hz Generator Set

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Electrician

**GRADES:** PVT, PFC, LCPL, CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** MOJT

**CONDITION:** Provided tools and reference.

**STANDARD:** To ensure safe operation of equipment in support of mission requirements and commanders' intent per TM 09244A/09245A-10/1.

**PERFORMANCE STEPS:**
1. Review reference.
2. Set up generator set.
3. Perform before operation checks.
4. Ensure all power cables are installed.
5. Start generator set.
6. Perform generator during operations checks.
7. Shut down generator set.
8. Perform after operation inspection.

**REFERENCES:**
1. TM 09244A/09245A-10/1 Operator's Manual for Generator Set, Skid Mounted, Tactical Quiet, 60kw, MEP-806A/MEP-816A (Jul 93), w/Ch 1 (May 95) & Ch 2 (Oct 96)

**SUPPORT REQUIREMENTS:**

**EQUIPMENT:** MEP-816A 60kW 400Hz Generator Set; General Mechanic's Tool Box

**MISCELLANEOUS:**

**ADMINISTRATIVE INSTRUCTIONS:** Graduates of the Basic Electrician Course (CID: M0311B2) are licensed operators of the MEP-816A 60kW 400Hz Generator Set. All other operators will need to be licensed through an authorized licensing program in the Total Force.

**SPECIAL PERSONNEL CERTS:** Operator must be licensed to operate the MEP-816A 60kW 400Hz Generator Set.

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**1141-XENG-2761:** Operate a MEP-816B 60kW 400Hz Generator Set.

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Electrician

**GRADES:** PVT, PFC, LCPL, CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** MOJT

**CONDITION:** Provided tools and reference.

**STANDARD:** To ensure safe operation of equipment in support of mission requirements and commanders' intent per TM 09244B/09245B-14/1.

**PERFORMANCE STEPS:**
1. Review reference.
2. Set up generator set.
3. Perform before operations checks.
4. Ensure all power cables are installed.
5. Start generator set.
6. Perform generator during operations checks.
7. Shut down generator set.
8. Perform after operation inspection.

**REFERENCES:**
1. TM 09244B/09245B-14-1 Operator, Unit, Direct Support and General Support Maintenance Manual for Generator Set, Skid Mounted, Tactical Quiet, 60kw, MEP-806B/MEP-816B (Jul 00)

**SUPPORT REQUIREMENTS:**

**EQUIPMENT:** MEP-816B 60kW 400Hz Generator Set; General Mechanic's Tool Box

**MISCELLANEOUS:**

**ADMINISTRATIVE INSTRUCTIONS:** Graduates of the Basic Electrician Course (CID: M0311B2) are licensed operators of the MEP-816B 60kW 400Hz Generator Set. All other operators will need to be licensed through an authorized licensing program in the Total Force.

**SPECIAL PERSONNEL CERTS:** Operator must be licensed to operate the MEP-816B 60kW 400Hz Generator Set.

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**1141-XENG-2764:** Operate a MEP-007B 100kW 60Hz Generator Set

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Electrician

**GRADES:** PVT, PFC, LCPL, CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** MOJT

**CONDITION:** Provided tools and reference.

**STANDARD:** To ensure safe operation of equipment in support of mission requirements and commanders' intent per TM 07464B-12.

**PERFORMANCE STEPS:**
1. Review reference.
2. Set up generator set.
3. Perform before operations checks.
4. Ensure all power cables are installed.
5. Start generator set.
6. Perform generator during operations checks.
7. Shut down generator set.
8. Perform after operation inspection.

**REFERENCES:**
1. TM 07464B-12 Operator and Organizational Maintenance Manual for Generator Set, Diesel Engine Driven, Tactical, Skid Mounted, 100 kW, MEP-007B

**SUPPORT REQUIREMENTS:**

**EQUIPMENT:** MEP-007B 100kW 60Hz Generator Set; General Mechanic's Tool Box

**MISCELLANEOUS:**

**ADMINISTRATIVE INSTRUCTIONS:** Graduates of the Basic Electrician Course (CID: M0311B2) are licensed operators of the MEP-007B 100kW 60Hz Generator Set. All other operators will need to be licensed through an authorized licensing program in the Total Force.

**SPECIAL PERSONNEL CERTS:** Operator must be licensed to operate the MEP-007B 100kW 60Hz Generator Set.

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**1141-XENG-2796:** Parallel/Shore Power with Integrated Trailer/ECU/Generator (ITEG)

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Electrician

**GRADES:** CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Provided equipment, tools, paralleling cable, conductors, over current protection and references.

**STANDARD:** To ensure technician can properly synchronize power equipment in order to share electrical load per the references.

**PERFORMANCE STEPS:**
1. Identify ELECTROCUTION HAZARD(S).
2. Identify FIRE/EXPLOSION HAZARD(S).
3. Identify CARBON MONOXIDE HAZARD(S).
4. Review references.
5. Reassess operational risk.
6. Don PPE.
7. Ensure generators are grounded.
8. Perform before operation checks on generators.
9. Connect generators/shore power with paralleling cable and conductors through over current protection.
10. Ensure all load/voltage requirements are observed.
11. Synchronize generators.
12. Contact load.
13. Make necessary adjustments.
14. Perform during operation checks/services.

**PREREQUISITE EVENTS:**
1141-ADMN-1001 1141-XENG-2718 1141-XENG-1756

**RELATED EVENTS:** 1142-MANT-1195

**REFERENCES:**
1. FM 5-424 Theater of Operations Electrical Systems (Jun 97)
2. TM 09249B/09246B-14 Operator, Unit, Direct Support and General Support Maintenance Manual for Generator Set, Skid Mounted, Tactical Quiet, 30 kW, MEP-805B/MEP-815B w/ Erratum
3. TM 11490A-OR Operation Manual with Repair Parts List, Integrated Trailer-ECU-Generator (ITEG)

4. TM 9406-15 Grounding Procedures for Electromagnetic Interference Control and Safety (Aug 91)
5. Appropriate Technical Manuals

**SUPPORT REQUIREMENTS:**

**EQUIPMENT:**
- Personal Protective Equipment (PPE)
- Tool Kit, Lineman's Electrician (TK-1141) [B0062]
- Tool Kit, Multi-Capable Maintainer [C7036]
- Integrated Trailer/ECU/Generator (ITEG) [B0018]
- MEP-805B 30kW 50/60Hz Tactical Quiet Generator Set [B0953] (if required)

**MATERIAL:**
- Paralleling cable
- Conductors
- Over current protection (MEPDIS/MEPDIS-R preferred if available)
- Fuel

**MISCELLANEOUS:**

**ADMINISTRATIVE INSTRUCTIONS:** Only trained/qualified Marines (MOS 1141) will parallel/shore power ITEG.

**SPECIAL PERSONNEL CERTS:** Due to the hazards involved, to both personnel and equipment, ITEG should only be paralleled/shore powered by trained/qualified (MOS 1141) Electricians.

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**1141-XENG-2821:** Direct field electrical power generator/distribution system recovery

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Electrician

**GRADES:** CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** MOJT

**CONDITION:** Given an operation order, camp layout, equipment, personnel, and reference.

**STANDARD:** To ensure required utilities services are retrograded, resulting in effective completion of service support to the unit, per the references.

**PERFORMANCE STEPS:**
1. Determine/review operation order and camp layout.
2. Determine/review safety requirements.
3. Review environmental requirements.
4. Brief installation crew.
5. Supervise electrical power generation/distribution system installation.
6. Inspect field electrical power generation/distribution system.
7. Correct discrepancies.

8. Brief recovery crew.
9. Supervise electrical power generation/distribution system recovery.

**REFERENCES:**
1. TM 9406-15 Grounding Procedures for Electromagnetic Interference Control and Safety (Aug 91)

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**1141-XENG-2963:** Install conduit in a permanent structure

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Electrician

**GRADES:** CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Provided a structure requiring electrical work, with an interior electrical plan, a Bill of Materials (BOM), tools and references.

**STANDARD:** To ensure electrical system upgrades enhance life support requirements in accordance with commanders' concept of operations, and NEC (NFPA 70).

**PERFORMANCE STEPS:**
1. Identify ELECTROCUTION HAZARD(S).
2. Review Bill of Materials (BOM).
3. Inventory BOM.
4. Review references.
5. Review electrical plan.
6. Assess risks (ORM).
7. Don PPE.
8. Bend conduit.
9. Place conduit in structure.
10. Inspect installation.

**PREREQUISITE EVENTS:** 1141-ADMN-1001

**RELATED EVENTS:**
1141-ADMN-1002 1141-XENG-1962 1141-XENG-1961
1141-MANT-1101

**REFERENCES:**
1. FM 5-424 Theater of Operations Electrical Systems (Jun 97)
2. NEC (NFPA 70) National Electrical Code - by National Fire Protection Association
3. SL-3-11390A Components List for Tool Kit, Intermediate Level Electricians (I-Level Tool Kit)(TK-1141/1)
4. TM 10209-10/1 Use and Care of Hand Tools & Measuring Tools
5. TM 5-704 Construction Print Reading in the Field

**SUPPORT REQUIREMENTS:**

**EQUIPMENT:**
- Personal Protective Equipment (PPE)
- Tool Kit, Intermediate Level Electrician's (TK-1141/1) [B7900]

**MATERIAL:** Bill of Materials (BOM), with conduit

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**1141-XENG-2964:** Direct interior electrical wiring system installation

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Electrician

**GRADES:** CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** MOJT

**CONDITION:** Provided a structure, construction blueprints, a lineman's tool set, a bill of materials (BOM), all materials listed on the BOM, and the reference.

**STANDARD:** To ensure required utilities services are established, resulting in effective service support to the unit, per the references.

**PERFORMANCE STEPS:**
1. Review electrical blueprints.
2. Review applicable section(s) of the reference.
3. Run wiring.
4. Inspect wiring.

**REFERENCES:**
1. National Electrical Code

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**1141-XENG-2965:** Direct interior electrical wiring system repairs

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Electrician

**GRADES:** CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** MOJT

**CONDITION:** Provided a structure, construction blueprints, a lineman's tool set, a bill of materials (BOM), all materials listed on the BOM, and the reference.

**STANDARD:** To ensure required utilities services are established, resulting in effective service support to the unit, per the references.

**PERFORMANCE STEPS:**
1. Review electrical blueprints.

2. Review applicable section(s) of the reference.
3. Run wiring.
4. Inspect wiring.

**REFERENCES:**
1. National Electrical Code

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**1141-XENG-2966:** Inspect the interior electrical wiring system of a permanent structure

**EVALUATION-CODED:** NO **SUSTAINMENT INTERVAL:** 12 months

**BILLETS:** Electrician

**GRADES:** CPL, SGT, SSGT

**INITIAL TRAINING SETTING:** FORMAL

**CONDITION:** Provided a structure, with construction blueprints, tools and the reference.

**STANDARD:** To ensure the serviceability of the existing electrical wiring system for compliance with the NEC (NFPA 70).

**PERFORMANCE STEPS:**
1. Review applicable section(s) of the reference.
2. Inspect wiring.
3. Inspect devices/fixtures.
4. Inspect service equipment.
5. Record/report discrepancies (if any).

**RELATED EVENTS:**
1141-XENG-1962 1141-XENG-1961

**REFERENCES:**
1. NEC (NFPA 70) National Electrical Code - by National Fire Protection Association

**SUPPORT REQUIREMENTS:**

**EQUIPMENT:** Tool Kit, Intermediate Level Electrician's (TK-1141/1) [B7900]

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