

Report Date: 19 Dec 2013

**Summary Report for Individual Task
052-204-2304
Perform Secondary Voltage Live-Line Testing
Status: Approved**

DISTRIBUTION RESTRICTION: Approved for public release; distribution is unlimited.

DESTRUCTION NOTICE: None

Condition: As a Power Line Distribution Specialist in a tactical or nontactical environment when live-line distribution equipment needs to be tested, you are given a one-line diagram, the applicable climbing and rigging equipment, hot-line tools, a voltage detector, a clamp-on amp meter, safety standing operating procedures (SOPs), the applicable manufacturer's literature, the Lineman's and Cableman's Handbook (LCH), applicable personal protective equipment (PPE), insulating protective equipment, electrical construction prints, wiring diagrams, and DA Form 2702 (Bill of Materials). Standard MOPP conditions do not exist for this task. See the MOPP statement for specific conditions.

Standard: Perform secondary live-line testing safely to determine whether the line is energized and at the proper voltage level.

Special Condition: None

Safety Level: Low

MOPP: N/A

Task Statements

Cue: None

<p>DANGER</p> <p>1. THIS TASK SHOULD ONLY BE PERFORMED BY QUALIFIED PERSONNEL KNOWLEDGEABLE IN THE INSTALLATION, OPERATION, AND MAINTENANCE OF MEDIUM-VOLTAGE, ELECTRICAL POWER GENERATION EQUIPMENT, AND THE ASSOCIATED HAZARDS. FAILURE TO COMPLY MAY CAUSE PERMANENT INJURY OR DEATH.</p> <p>2. A VOLTAGE DETECTOR SHOULD BE USED TO ENSURE THAT THE CABLES ARE NOT ENERGIZED. MATERIAL (SUCH AS A LEAD SHEATH THAT ACTS AS A SHIELD) MUST NOT BE BETWEEN THE TESTER AND THE CONDUCTORS OF THE CIRCUIT BEING TESTED. FAILURE TO TEST THE CABLES MAY CAUSE PERMANENT INJURY OR DEATH.</p>
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<p>WARNING</p> <p>None</p>

<p>CAUTION</p> <p>None</p>

Remarks: All required Prime Power specific references and technical manuals will be provided by the local Prime Power Command.

Notes: None

Performance Steps

1. Review danger, warning, and caution notices before proceeding.
2. Review the manufacturer's literature, electrical construction prints, and wiring diagrams.
3. Ensure that PPE, hot-line equipment, and test equipment is correctly tested and fully mission-capable.
4. Ensure that personnel are safely positioned or removed from the area to be tested.
5. Perform an initial equipment self-test.
6. Test each secondary phase conductor or circuit part with adequately rated test equipment.
 - a. Check a known energized circuit to ensure that the test equipment is working correctly.
 - b. Check a known de-energized circuit to ensure that the test equipment is working correctly.
 - c. Test the identified energized circuit, and verify the test results.
7. Ensure that the items listed in the conditions are properly cleaned and stored.

(Asterisks indicates a leader performance step.)

Evaluation Guidance: Score the Soldier GO if all performance measures are passed (P).
 Score the Soldier NO GO if any performance measure is failed (F).
 If the Soldier scores NO GO, show the Soldier what was done wrong and how to do it correctly.

Evaluation Preparation: Provide the Soldier with the items in the conditions. Give the Soldier a safety briefing before starting, and ensure that all safety precautions are followed. Prepare area and equipment in advance to ensure that the task standards can be met.

PERFORMANCE MEASURES	GO	NO-GO	N/A
1. Reviewed danger, warning, and caution notices before proceeding.			
2. Reviewed the manufacturer's literature, electrical construction prints, and wiring diagrams.			
3. Ensured that PPE, hot-line equipment, and test equipment was correctly tested and fully mission-capable.			
4. Ensured that personnel were safely positioned or removed from the area to be tested.			
5. Performed an initial equipment self-test.			
6. Tested each secondary phase conductor or circuit part with adequately rated test equipment.			
7. Ensured that the items listed in the conditions were properly cleaned and stored.			

Supporting Reference(s):

Step Number	Reference ID	Reference Name	Required	Primary
	DA FORM 2702	Bill of Materials	Yes	No
	EM 385-1-1	Safety and Health Requirements.	No	No
	ER 385-1-31	Safety & Occupational Health. The Control of Hazardous Energy (Safe Clearance).	No	No
	LCH	The Lineman's and Cableman's Handbook, 11th Edition, McGraw-Hill. 2007	Yes	No
	NTRP 4-04.2.3/TM 3-34.41/AFPAM 32-1000	Construction Estimating (HTTPS://NDLS.NWDC.NAVY.MIL) (https://armypubs.us.army.mil/doctrine/DR_pubs/dr_aa/pdf/tm3_34x41_PH_Navy.pdf)	No	No
	NTRP 4-04.2.5/TM 3-34.42/AFPAM 32-1020/MCRP 3-17.7F	Construction Project Management (HTTPS://NDLS.NWDC.NAVY.MIL) (https://armypubs.us.army.mil/doctrine/DR_pubs/dr_aa/pdf/tm3_34x42_PH_Navy.pdf)	No	No
	TM 3-34.45	ENGINEER PRIME POWER OPERATIONS	No	No
	TM 5-682	Facilities Engineering: Electrical Facilities Safety.	No	No
	TM 5-684	Facilities Engineering - Electrical Exterior Facilities. NAVFAC MO-200/AFJMAN 32-1082.	No	No
	TM 5-811-1	Electric Power Supply and Distribution {AFJMAN 32-1080}	No	No
	TM 5-811-3	Electrical Design: Lightning and Static Electricity Protection. AFM 88-9, Chap 3.	No	No

Environment: Environmental protection is not just the law but the right thing to do. It is a continual process and starts with deliberate planning. Always be alert to ways to protect our environment during training and missions. In doing so, you will contribute to the sustainment of our training resources while protecting people and the environment from harmful effects. Refer to FM 3-34.5 Environmental Considerations and GTA 05-08-002 ENVIRONMENTAL-RELATED RISK ASSESSMENT. Environmental protection is not just the law but the right thing to do. It is a continual process and starts with deliberate planning. Always be alert to ways to protect our environment during training and missions. In doing so, you will contribute to the sustainment of our training resources while protecting people and the environment from harmful effects. Refer to FM 3-34.5 Environmental Considerations and GTA 05-08-002 ENVIRONMENTAL-RELATED RISK ASSESSMENT.

Safety: In a training environment, leaders must perform a risk assessment in accordance with FM 5-19, Risk Management. Leaders will complete a DA Form 7566 COMPOSITE RISK MANAGEMENT WORKSHEET during the planning and completion of each task and sub-task by assessing mission, enemy, terrain and weather, troops and support available-time available and civil considerations, (METT-TC). Note: During MOPP training, leaders must ensure personnel are monitored for potential heat injury. Local policies and procedures must be followed during times of increased heat category in order to avoid heat related injury. Consider the MOPP work/rest cycles and water replacement guidelines IAW FM 3-11.4, Multiservice Tactics, Techniques, and Procedures for Nuclear, Biological, and Chemical (NBC) Protection, FM 3-11.5, Multiservice Tactics, Techniques, and Procedures for Chemical, Biological, Radiological, and Nuclear Decontamination. Everyone is responsible for safety. A thorough risk assessment must be completed prior to every mission or operation.

Prerequisite Individual Tasks :

Task Number	Title	Proponent	Status
052-204-1115	Rescue an Injured Victim From a Manhole	052 - Engineer (Individual)	Approved
052-204-1203	Perform Operator Preventive-Maintenance Checks and Services (PMCS) on a Bucket/Material Handler Truck	052 - Engineer (Individual)	Approved

052-204-1128	Interpret an Electrical One-Line Diagram	052 - Engineer (Individual)	Analysis
052-204-1117	Inspect Hot-Line Equipment	052 - Engineer (Individual)	Approved
052-204-1114	Rescue an Injured Victim From a Utility Pole	052 - Engineer (Individual)	Approved
052-204-1127	Perform Groundman Duties	052 - Engineer (Individual)	Approved
052-204-1124	Climb a Utility Pole	052 - Engineer (Individual)	Approved
052-204-1116	Rescue an Injured Victim From an Aerial-Bucket Truck	052 - Engineer (Individual)	Approved
052-204-1108	Inspect Safety Equipment	052 - Engineer (Individual)	Approved
052-204-1113	Prepare a Manhole for Safe Entry	052 - Engineer (Individual)	Approved
052-204-1201	Maintain Climbing Equipment	052 - Engineer (Individual)	Approved
052-204-1202	Maintain Rigging/Hoisting Equipment	052 - Engineer (Individual)	Approved
052-204-1212	Operate a Bucket/Material Handler Truck	052 - Engineer (Individual)	Approved
052-204-1204	Tie Rope Knots and Splices	052 - Engineer (Individual)	Approved

Supporting Individual Tasks :

Task Number	Title	Proponent	Status
052-204-2212	Energize an Electrical Distribution System	052 - Engineer (Individual)	Approved
052-204-1203	Perform Operator Preventive-Maintenance Checks and Services (PMCS) on a Bucket/Material Handler Truck	052 - Engineer (Individual)	Approved
052-204-2209	Install Distribution Equipment (Energized)	052 - Engineer (Individual)	Approved
052-204-1122	Install Distribution Equipment (De-energized)	052 - Engineer (Individual)	Approved
052-204-2303	Perform Primary Voltage Live-Line Testing	052 - Engineer (Individual)	Approved
052-204-1116	Rescue an Injured Victim From an Aerial-Bucket Truck	052 - Engineer (Individual)	Approved
052-204-2305	Trouble Shoot Primary/Secondary Voltage Systems	052 - Engineer (Individual)	Approved
052-204-2301	Perform Switching, Blocking and Tagging Procedures	052 - Engineer (Individual)	Approved
052-204-1212	Operate a Bucket/Material Handler Truck	052 - Engineer (Individual)	Approved
052-204-2216	Perform Maintenance on Electrical Distribution Equipment	052 - Engineer (Individual)	Approved
052-204-1123	Secure Conductor to Insulator (De-energized)	052 - Engineer (Individual)	Approved

Supported Individual Tasks :

Task Number	Title	Proponent	Status
052-204-2216	Perform Maintenance on Electrical Distribution Equipment	052 - Engineer (Individual)	Approved
052-204-1121	Install High-Intensity Lights and Ballasts	052 - Engineer (Individual)	Approved
052-204-2305	Trouble Shoot Primary/Secondary Voltage Systems	052 - Engineer (Individual)	Approved
052-204-1211	Install Distribution System Protection and Equipment (De-energized)	052 - Engineer (Individual)	Approved
052-204-2212	Energize an Electrical Distribution System	052 - Engineer (Individual)	Approved
052-204-1123	Secure Conductor to Insulator (De-energized)	052 - Engineer (Individual)	Approved
052-204-1126	Perform Crossarm Change Out (With Conductors)	052 - Engineer (Individual)	Approved

Supported Collective Tasks :

Task Number	Title	Proponent	Status
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05-3-5719	Perform Power Plant Generation System Maintenance Technical Assistance	05 - Engineers (Collective)	Approved
05-3-5727	Install Underground Distribution Equipment	05 - Engineers (Collective)	Approved
05-3-5713	Perform a Power Distribution System Maintenance Survey	05 - Engineers (Collective)	Approved
05-3-5716	Perform Power Plant Installation Technical Assistance	05 - Engineers (Collective)	Approved
05-3-5723	Install Prime Power Generation Equipment	05 - Engineers (Collective)	Approved
05-3-5704	Perform Nonorganic Equipment Power Distribution Maintenance Operations	05 - Engineers (Collective)	Approved
05-3-5728	Assess Power Generation Systems for Damage	05 - Engineers (Collective)	Approved
05-3-5732	Conduct Electrical-Power Generation Equipment Intermediate Maintenance Operations	05 - Engineers (Collective)	Approved
05-3-5730	Perform Electrical-Power Generation Equipment Organizational Maintenance Operations	05 - Engineers (Collective)	Approved
05-3-5701	Install Low-Voltage, Electrical-Power Distribution Equipment	05 - Engineers (Collective)	Approved
05-3-5725	Install Aerial Electrical Power Distribution Equipment	05 - Engineers (Collective)	Approved
05-3-5707	Perform Nonorganic Power Generation System Maintenance Operations	05 - Engineers (Collective)	Approved
05-3-5724	Install Expedient, Surface-Laid, Electrical-Power Distribution Equipment	05 - Engineers (Collective)	Approved
05-3-5711	Perform a Power Plant Operations Survey	05 - Engineers (Collective)	Approved
05-3-5703	Perform Electrical Safety Systems Testing and Maintenance	05 - Engineers (Collective)	Approved
05-3-5731	Perform Electrical-Power, Distribution Equipment Organizational Maintenance Operations	05 - Engineers (Collective)	Approved
05-3-5700	Install Nonstandard Low-Voltage, Electrical-Power Distribution Equipment	05 - Engineers (Collective)	Approved
05-3-5729	Operate Power Generation and Distribution Equipment	05 - Engineers (Collective)	Approved
05-3-5702	Install Underground Electrical-Power Distribution Equipment	05 - Engineers (Collective)	Approved

ICTL Data :

ICTL Title	Personnel Type	MOS Data
12Q20, Power Line Distribution Specialist, skill level 2	Enlisted	MOS: 12Q, Skill Level: SL2
ASI U4, Power Line Distribution	Enlisted	MOS: 12P, ASI: U4