

Summary Report for Individual Task
551-88U-1410
Identify Locomotive Electrical Components
Status: Approved

Distribution Restriction: Approved for public release; distribution is unlimited.

Destruction Notice: None

Foreign Disclosure: FD6 - This product/publication has been reviewed by the product developers in coordination with the Fort Lee, VA foreign disclosure authority. This product is releasable to students from foreign countries on a case-by-case basis.

Condition: Assigned as a Railway Specialist with the requirement to advise COCOM/Host Nation personnel on identifying locomotive electrical components, given Personal Protective Equipment, completed risk assessment, a locomotive, current locomotive maintenance manuals, day or night, in all weather conditions, and in an operational environment. Some iterations of this task should be performed in MOPP 4.

Standard: Identify locomotive electrical components without causing injury to personnel or damage to equipment in accordance with Locomotive Electrical Maintenance book and EMD 645E Engine Maintenance Manual.

Special Condition: None

Safety Risk: Low

MOPP 4: Sometimes

Task Statements

Cue: Your team has just arrived at a new railyard. You must determine if the local rail crew can identify locomotive electrical components.

DANGER
None

WARNING
None

CAUTION
Working around live tracks is always dangerous. Follow all safety procedures outlined in the GCOR. Install portable derail or flag protection IAW GCOR and ATP 4-14.

Remarks: None

Notes: None

Performance Steps

1. Identify Fuses in the Electrical Cabinet
2. Identify Battery and Charging System
3. Identify Fractional Horsepower Motors
4. Identify Engine Cooling Fans and Traction Motor Blowers
5. Identify Traction Motors
6. Identify Main Generator
7. Identify Auxiliary Generator
8. Identify Load Regulator
9. Identify Alternator
10. Identify Reverser and Throttle
11. Identify Contactors
12. Identify Relays
13. Identify Control Circuits
14. Identify Lighting Circuits
15. Identify Electrical Protective System

(Asterisks indicates a leader performance step.)

Evaluation Guidance: Mark each performance measure either GO or NO-GO. The Soldier must complete all steps to receive a GO for each measure. All measures must be marked GO to receive an overall GO on the task. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the Soldier that he/she will be evaluated on identifying locomotive electrical components.

PERFORMANCE MEASURES	GO	NO-GO	N/A
1. Identified Fuses in the Electrical Cabinet			
2. Identified Battery and Charging System			
3. Identified Fractional Horsepower Motors			
4. Identified Engine Cooling Fans and Traction Motor Blowers			
5. Identified Traction Motors			
6. Identified Main Generator			
7. Identified Auxiliary Generator			
8. Identified Load Regulator			
9. Identified Alternator			
10. Identified Reverser and Throttle			
11. Identified Contactors			
12. Identified Relays			
13. Identified Control Circuits			
14. Identified Lighting Circuits			
15. Identified Electrical Protective System			

Supporting Reference(s):

Step Number	Reference ID	Reference Name	Required	Primary
	EMD 645E	EMD 645E Maintenance Instructions	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.

AR 200-1 delineates TRADOC responsibilities to integrate environmental requirements across DOTMLPF and ensures all training procedures, training manuals, and training doctrine includes sound environmental practices and considerations. The Army's environmental vision is to be a national leader in environmental and natural resource stewardship for present and future generations as an integral part of all Army missions. Environmental protection is never completed. Continuously be alert to ways to protect our environment and reduce waste.

Leaders must ensure that their unit has an active and strong environmental program. They must understand the laws and know what actions to take. Leaders bring focus, direction, and commitment to environmental protection. Commanding officers should ensure the following environmental programs are in place and are being maintained:

- Hazardous materials program.
- Hazardous waste program.
- Hazardous communications program.
- Pollution prevention and hazardous waste minimization recycling program.
- Spill prevention and response plan program.

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.

All operations will be performed to protect and preserve Army personnel and property against accidental loss. Procedures will provide for public safety incidental to Army operations and activities and safe and healthful workplaces, procedures, and equipment. Observe all safety and/or environment precautions regarding electricity, cable, and lines. Provide ventilation for exhaust fumes during equipment operation and use hearing protection when required IAW AR 385-10, the Clean Air Act (CAA) and the CAA amendments, and the OSHA Hazard Communication standard.

Accidents are an unacceptable impediment to Army missions, readiness, morale, and resources. Decision makers at every level will employ risk management approaches to effectively preclude unacceptable risk to the safety of personnel

- and property affiliated with this task.
- (a) Take personal responsibility.
 - (b) Practice safe operations.
 - (c) Recognize unsafe acts and conditions.
 - (d) Take action to prevent accidents.
 - (e) Report unsafe acts and conditions.
 - (f) Work as a team.

Prerequisite Individual Tasks : None

Supporting Individual Tasks : None

Supported Individual Tasks : None

Supported Collective Tasks : None

ICTL Data :

ICTL Title	Personnel Type	MOS Data
88U10 Railway Specialist Task List	Enlisted	MOS: 88U, Skill Level: SL1