

551-88U-2450
Verify Replacement of Special Track Work
Status: Approved

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

Destruction Notice: None

Foreign Disclosure: FD1 - This training product has been reviewed by the training developers in coordination with the Transportation School, Fort Lee, VA foreign disclosure officer. This training product can be used to instruct international military students from all approved countries without restrictions.

Conditions: Assigned as a Railway Specialist, given the requirement to advise COCOM/Host Nation personnel on how to verify the replacement of special track work, given PPE, a complete risk assessment, all applicable publications, forms, records, tools, materials, personnel, and equipment, day or night, in all weather conditions, and in an operational environment. Some iterations of this task should be performed in MOPP 4.

Standards: Verify the replacement of special track work without causing injury to personnel or damage to equipment.

Special Conditions: None

Safety Risk: Low

MOPP 4: Sometimes

Task Statements

Cue: Your ERC team has been tasked to advise COCOM/Host Nation personnel on how to verify the replacement of special track work.

DANGER
None

WARNING
None

CAUTION
Working around live tracks is always dangerous. Follow all safety procedures outlined in GCOR, ATP 4-14, and UFC 4-860-03.

Remarks: None

Notes: None

Performance Steps

1. Verify specs are provided for manufacturing of the special track work.
 - a. Check that drawings for the special track work are correct.
 - b. Check for shop assembly instructions on special track work.
 - c. Check that special track work is inspected.
 - d. Check that packing and shipping instructions are correct.
2. Ensure three categories for improvement are followed.
 - a. Removing obstructions.
 - (1) When feasible remove any obstructions that prevent the motorist from viewing the crossing ahead, a train occupying the crossing, or active control devices at the crossing.
 - (2) Ensure right-of-way is treated with herbicides to prevent new growth.
 - b. Crossing geometry.
 - (1) The ideal crossing geometry is a 90-degree intersection of track and highway with slight-ascending grades on both highway approaches to reduce the flow of surface water toward the crossing.
 - (2) Topography or limitations of right-of-way for both the highway and the railroad make it hard to get ideal geometry.
 - c. Illumination.
3. Verify all pieces of special track work are on site.
 - a. Turnouts.
 - b. Pre-established shoulder portions on plates.
 - c. Joint bars, bolts, D-bar, and heel blocks.
 - d. Switch stands.
 - e. Frogs.
4. Verify sections of special track work are replaced according to specs, drawings, and 49 CFR 213.
 - a. Roadbed.
 - b. Drainage.
 - c. Vegetation control.
 - d. Track geometry.
 - e. Track gage.
 - f. Track running surface.
 - g. Rail joints.
5. Verify all special track work is replaced and job is completed.
 - a. Perform a locomotive test run over special track work.

- b. Check special track work after locomotive has completed the test run.
6. Ensure panels are installed.
7. Ensure rail joints are staggered.
8. Ensure ties are plugged.
9. Ensure joint bars are installed.
10. Ensure ties are spiked and proper spike pattern followed.
11. Ensure rail is in gage.
12. Ensure ballast is spread and dressed.
13. Ensure all tools are removed and site is clean.
14. Verify that control devices to improve safety are in place.
 - a. Ensure passive and active devices are used to protect public.
 - (1) Passive devices include fencing, swing gates, pedestrian barriers, pavement markings and texturing, refuge areas, and fixed message signs.
 - (2) Active devices include flashers, audible active control devices, automated pedestrian gates, pedestrian signals, variable message signs, and blank-out signs.
 - b. Ensure all devices are designed to minimize pedestrian crossing time and avoid trapping pedestrians between sets of tracks.
15. Verify functionality of gates and lights.
16. Verify that there is a generator or functioning battery back-up.
17. Verify site and operational improvements are in place.
18. Verify all ties in crossing are new, high quality, properly treated, hardwood ties.
19. Verify each tie is plated and spiked with 8 rail-holding spikes.
20. Verify no rail joints are in crossing.
21. Verify all rail crossing bolts are in place and tight.
 - a. Ensure loose bolts are tightened.
 - b. Ensure bolts that cannot be tightened are replaced.
 - c. Ensure missing bolts are replaced.
22. Verify every third tie has box-anchor for at least two rail lengths when rail anchors are being used.
23. Verify adequate drainage of surface water away from crossing.
24. Verify condition of material within crossing is good.
 - a. Ensure no broken pavement or potholes at asphalt and concrete crossings.
 - b. Ensure no loose, sticking up, or otherwise damaged planks, filler blocks or lag screws at timber crossings.

c. Ensure any damaged components are repaired or replaced.

25. Verify track is in gauge and to proper super elevation.

(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 checking the replacement of special track work.

PERFORMANCE MEASURES	GO	NO-GO	N/A
1. Verified specs were provided for manufacturing of the special track work.			
2. Ensured three categories for improvements were in place.			
3. Verified all pieces of special track work were on site.			
4. Verified sections of special track work were replaced according to specs, drawings, and 49 CFR 213.			
5. Verified all special track work was replaced and job was completed.			
6. Ensured panels were installed.			
7. Ensured rail joints were staggered.			
8. Ensured ties were plugged.			
9. Ensured joint bars were installed.			
10. Ensured ties were spiked and proper spike pattern followed.			
11. Ensured rail was in gage.			
12. Ensured ballast was spread and dressed.			
13. Ensured all tools were removed and site was clean.			
14. Verified that control devices to improve safety were in place.			
15. Verified functionality of gates and lights.			
16. Verified that there was a generator or functioning battery back-up.			
17. Verified all ties in crossing were new, high quality, properly treated, hardwood ties.			
18. Verified each tie was plated and spiked with 8 rail-holding spikes.			
19. Verified no rail joints were in crossing.			
20. Verifid all rail crossing bolts were in place and tight.			
21. Verified every third tie was box-anchored for at least two rail lengths when rail anchors were being used.			
22. Verified adequate drainage of surface water was away from crossing.			
23. Verified condition of material within crossing was good.			
24. Verified track was in gauge and had proper super elevation.			

Supporting Reference(s):

Step Number	Reference ID	Reference Name	Required	Primary
	ATP 4-14	Expeditionary Railway Center Operations	Yes	No
	GCOR	General Code of Operating Rules (GCOR), Seventh Edition	Yes	No
	UFC 4-860-03	Unified Facilities Criteria (UFC): Railroad Track Maintenance & Safety Standards	Yes	Yes

TADSS : None

Equipment Items (LIN):

LIN	Name
DA153M	Helmet, Safety
NA1520	Case, Ear Plug
DA3045	Boots, Safety
HA4052	Safety Glasses, Revision Sawfly E
DA159T	Vest Safety RV-1

Material Items (NSN) :

Step ID	NSN	LIN	Title	Qty
No materiel items specified				

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 the current Environmental Considerations manual and the current GTA Environmental-related Risk Assessment card.

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 current Risk Management Doctrine. Leaders will complete the current Deliberate Risk Assessment Worksheet in accordance with the TRADOC Safety Officer 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 current CBRN doctrine.

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

Knowledges :

Knowledge ID	Knowledge Name
K-551-T-0046	Knowledge of track repair procedures
K-551-T-0047	Knowledge of rail crossing standards
K-551-T-0038	Knowledge of roadway standards
K-551-T-0039	Knowledge of crosstie standards
K-551-T-0033	Knowledge of track safety standards
K-551-T-0035	Knowledge of FRA Inspection Standards for grade crossings signals
K-551-T-0001	Knowledge of rail track standards
K-551-U-0039	Knowledge of track inspections
K-551-T-0025	Knowledge of FRA Rules
K-551-T-0007	Knowledge of ballast standards
K-551-T-0006	Knowledge of rail grinding
K-551-T-0011	Knowledge of road and rail crossings
K-551-T-0017	Knowledge of track maps

K-551-T-0051	Knowledge of production track maintenance techniques
K-551-T-0012	Knowledge of track nomenclature
K-551-T-0019	Knowledge of turnouts standards
K-551-T-0014	Knowledge of vegetation and vegetation control

Skills :

Skill ID	Skill Name
S-551-T-0030	Ability to inspect track and roadway
S-551-P-0100	Ability to replace railing

ICTL Data : None