

Summary Report for Individual Task
052-247-1325
Move a Heavy Load Within a Structural Collapse

Status: Approved

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

Destruction Notice: None

Foreign Disclosure: FD5 - This product/publication has been reviewed by the product developers in coordination with the Ft Leonard Wood MO/MSCOE foreign disclosure authority. This product is releasable to students from all requesting foreign countries without restrictions.

Condition: You are a member of an Urban Search and Rescue (US&R) team and are given pry bar levers, cribbing equipment, steel rollers, rope, carabiners, pulleys, brake bar rack, load and personal protective equipment (PPE). This task should not be trained in MOPP 4.

Standard: Move a heavy load ensuring the load is moved, controlled and stabilization is maintained during entire operation in accordance with (IAW) National Fire Protection Association (NFPA) 1006 standards.

Special Condition: None

Safety Risk: Medium

MOPP 4: Never

Task Statements

Cue: None

DANGER
None

WARNING
None

CAUTION
None

Remarks: All required references and technical manuals will be provided by the local US&R command.

Notes: US&R activities are collective in nature, however, each individual US&R member must be able to complete all steps individually during the task at some point.

Performance Steps

1. Size-up the load to be moved.
 - a. Calculate the weight of the load. (See task 052-247-2106)
 - b. Identify the proper tools and moving equipment.
2. Designate a rescuer to perform leader duties.
3. Appoint the following positions.
 - a. Assign two crib builders to build cribs and use pry bars to move the load.
 - b. Assign two rescuers to supply cribbing materials to crib builders and use wedges and brakes.
 - c. Assign two rescuers as lifters, who will operate the pry bars.
 - d. Assign rescuers to construct and operate a mechanical advantage system.
 - e. Assign rescuers to construct and operate a lowering system.
4. Prepare to move the load.
 - a. Place the runners (wood tracks) on the ground ahead of the load in the direction of desired travel.
 - b. Place the rollers ahead of the load to prevent the front of the load from grounding out and losing momentum.

Note: If the ground is soft under the load or if the surface is uneven or broken, it may be necessary to build runners to put rollers on. In effect, it may be necessary to build a track system. The load will have to be lifted high enough to slide not only the tracks, but also the rollers under the load.
 - c. Construct an inclined plane using cribbing and wedges as needed. (See task 052-247-1225)
 - (1) Lay the runners on top of the cribbing.
 - (2) Place the rollers on the inclined plane runners ahead of the load.



Figure 052-247-1325-1
Inclined Plane

- d. Construct a bridge out of cribbing material over the obstacle. (As needed)
 - (1) Construct crib beds and use wedges as needed. (See task 052-247-1225)
 - (2) Lay the runners on top of the cribbing bridge.
 - (3) Place the rollers on the bridge runners ahead of the load.
 - e. Construct a decline plane using cribbing and wedges as needed. (See task 052-247-1225)
 - (1) Lay the runners on top of the cribbing.
 - (2) Place the rollers on the inclined plane runners ahead of the load.
 - f. Rig the load for movement by placing attachment points on top of both ends of the load. (See task 052-247-1227)
 - g. Construct a mechanical advantage system. (See task 052-247-1302)
 - h. Construct a lowering system on the opposite side of the load as mechanical advantage system. (See task 052-247-1207)
5. Move the load on rollers.
- a. The leader gives the command "prepare to lift".
 - b. Team leader gives command "lift".

- c. Lift the load onto the edge of runners and rollers. (See task 052-247-1226)
- d. Control the speed and load shift by using wedges or pry bars as brakes.
- e. Continue to rotate the pipe rollers ahead of the moving load once the load has cleared the rear of the rollers.
- f. Set the wedges to stop load shift or when at final destination.

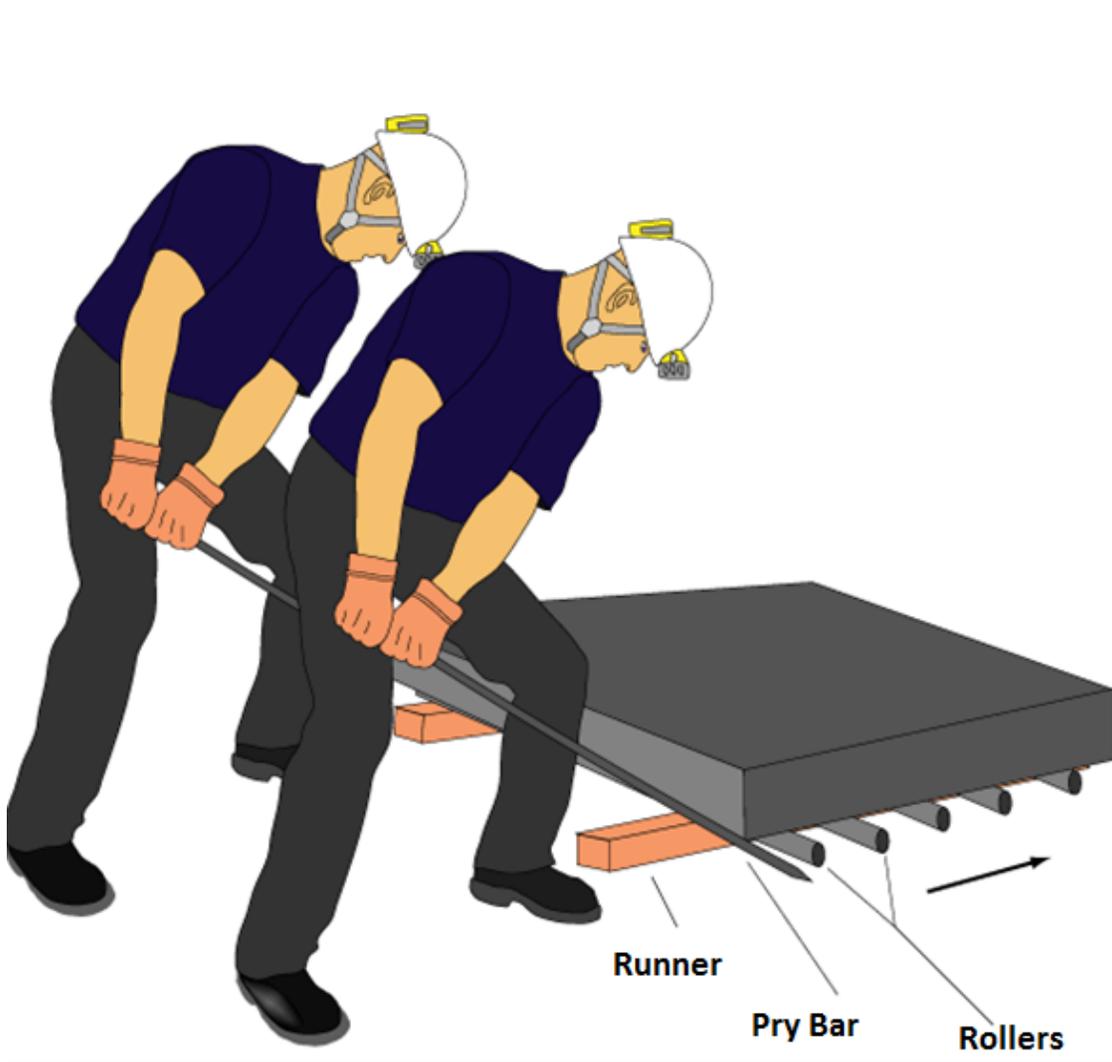


Figure 052-247-1325-2
Pry Bar on Rollers

- 6. Move the load over an obstacle.
 - a. Attach the rigged mechanical advantage system to the rigged attachment point on the load.
 - b. Attach the rigged lowering system to the rigged attachment point on the load.
 - c. Move the load up the incline plane and across the bridge by operating the mechanical advantage (raising) system. (See task 052-247-1331)
 - (1) The leader gives the command "prepare to lift".

(2) The leader gives the command "lift load".

(3) Lift the load up the incline plane and across the bridge by operating the mechanical advantage (raising) system. (See task 052-247-1331)



Figure 052-247-1325-3
Lift the Load

(4) Use the wedges and pry bars to control the speed of the load.

(5) Continue to rotate the pipe rollers ahead of the moving load once the load has cleared the rear of the rollers.

(6) Set the wedges to prevent load shift or when load is ready to start the descent on the decline plane.

d. Lower the load down the decline plane.

(1) The leader gives the command "prepare to lower".

(2) The leader gives the command "lower load".

(3) Lower the load down the decline plane by operating the lowering system. (See task 052-247-1330)

(4) Use the wedges and pry bars to control the speed of the load.

(5) Continue to rotate the pipe rollers ahead of the moving load until the load has reached the bottom of the decline plane.

e. Transfer the load from the decline plane to a flat plane runner and roller system.

f. Remove the mechanical advantage and lowering systems from the load.

(Asterisks indicates a leader performance step.)

Evaluation Guidance: Score the Soldier GO if all measures are passed (P). Score the Soldier NO-GO if any measure is failed (F). If the Soldier fails any measure, show him how to do it correctly

Evaluation Preparation: Setup: Provide the Soldier with all the items listed in the conditions.
Brief the Soldier: Tell the Soldier to Move a Heavy Load within a Structural Collapse.

PERFORMANCE MEASURES	GO	NO-GO	N/A
1. Sized-up the load to be moved.			
2. Designated a rescuer to perform leader duties.			
3. Appointed positions.			
4. Prepared to move the load.			
5. Moved the load on rollers.			
6. Moved the load over an obstacle.			

Supporting Reference(s):

Step Number	Reference ID	Reference Name	Required	Primary
	IFSTA	International Fire Service Training Association (IFSTA) Fire Service Search and Rescue, 7th Edition	No	No
	IFSTA - 1st Edition	IFSTA Technical Rescue for Structural Collapse, 1st Edition	No	No
	NFPA 1006	Standard for Rescue Technician Professional Qualifications	Yes	Yes

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.

Safety: In a training environment, leaders must perform a risk assessment in accordance with ATP 5-19, Risk Management. 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 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.

Prerequisite Individual Tasks : None

Supporting Individual Tasks :

Task Number	Title	Proponent	Status
052-247-2106	Calculate the Weight of a Load for Rubble Removal	052 - Engineer (Individual)	Approved
052-247-1331	Operate a Raising System	052 - Engineer (Individual)	Approved
052-247-1225	Construct Cribbing System(s) to Stabilize a Load	052 - Engineer (Individual)	Analysis
052-247-1330	Operate a Lowering System	052 - Engineer (Individual)	Approved
052-247-1226	Conduct Lifting Operations for a Structural Collapse	052 - Engineer (Individual)	Approved

052-247-1302	Construct a Simple Rope Mechanical Advantage System for Rope Rescues	052 - Engineer (Individual)	Approved
052-247-1227	Rig a Load for Rubble Removal	052 - Engineer (Individual)	Analysis
052-247-1301	Tie Knots, Bends, and Hitches for Rope Rescues	052 - Engineer (Individual)	Approved

Supported Individual Tasks :

Task Number	Title	Proponent	Status
052-247-1225	Construct Cribbing System(s) to Stabilize a Load	052 - Engineer (Individual)	Analysis

Supported Collective Tasks : None