

Summary Report for Individual Task
052-247-1306
Construct a Compound Rope Mechanical Advantage System for Rope Rescues
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 life safety rope, a fixed anchor system attached to an anchor plate, webbing, prusik cord, carabiners, pulleys, progress capture devices (PCD). This task should not be trained in MOPP 4.

Standard: Construct mechanical advantage systems ensuring the system is efficient, can accommodate the load, is connected to an anchor system and the load in accordance with (IAW) National Fire Protection Association (NFPA) 1006.

Special Condition: None

Safety Risk: Low

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 US&R Command.

Notes: An additional carabiner may be used to attach PCDs, prusiks, and pulleys to the mechanical advantage system.

Performance Steps

1. Construct a 6:1 mechanical advantage system.
 - a. Construct a 3:1 mechanical advantage system. (See task 052-247-1302)
 - b. Construct a 2:1 MA system without the PCD. (See task 052-247-1302)
 - c. Connect the 3:1 to the 2:1's haul line with a prusik.

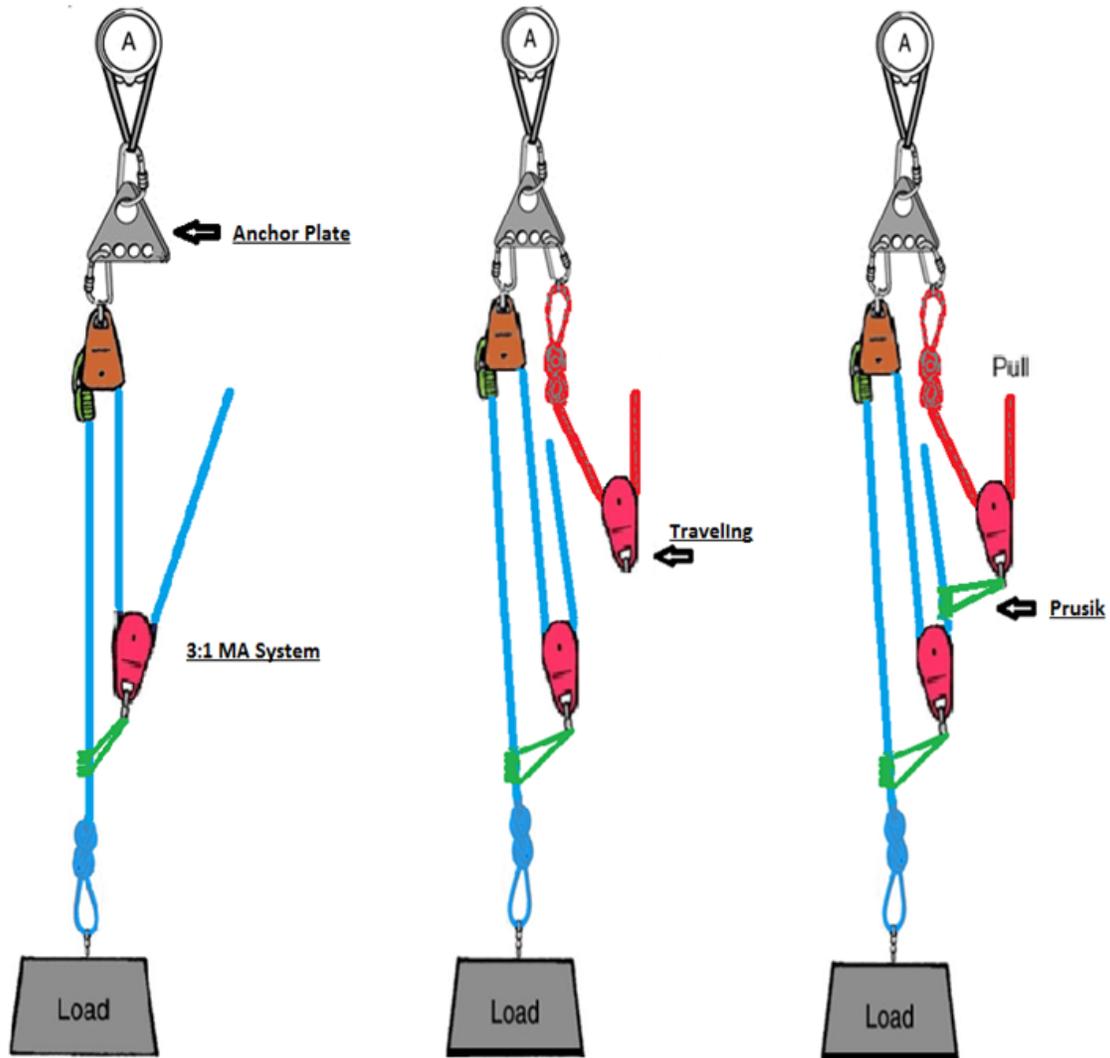
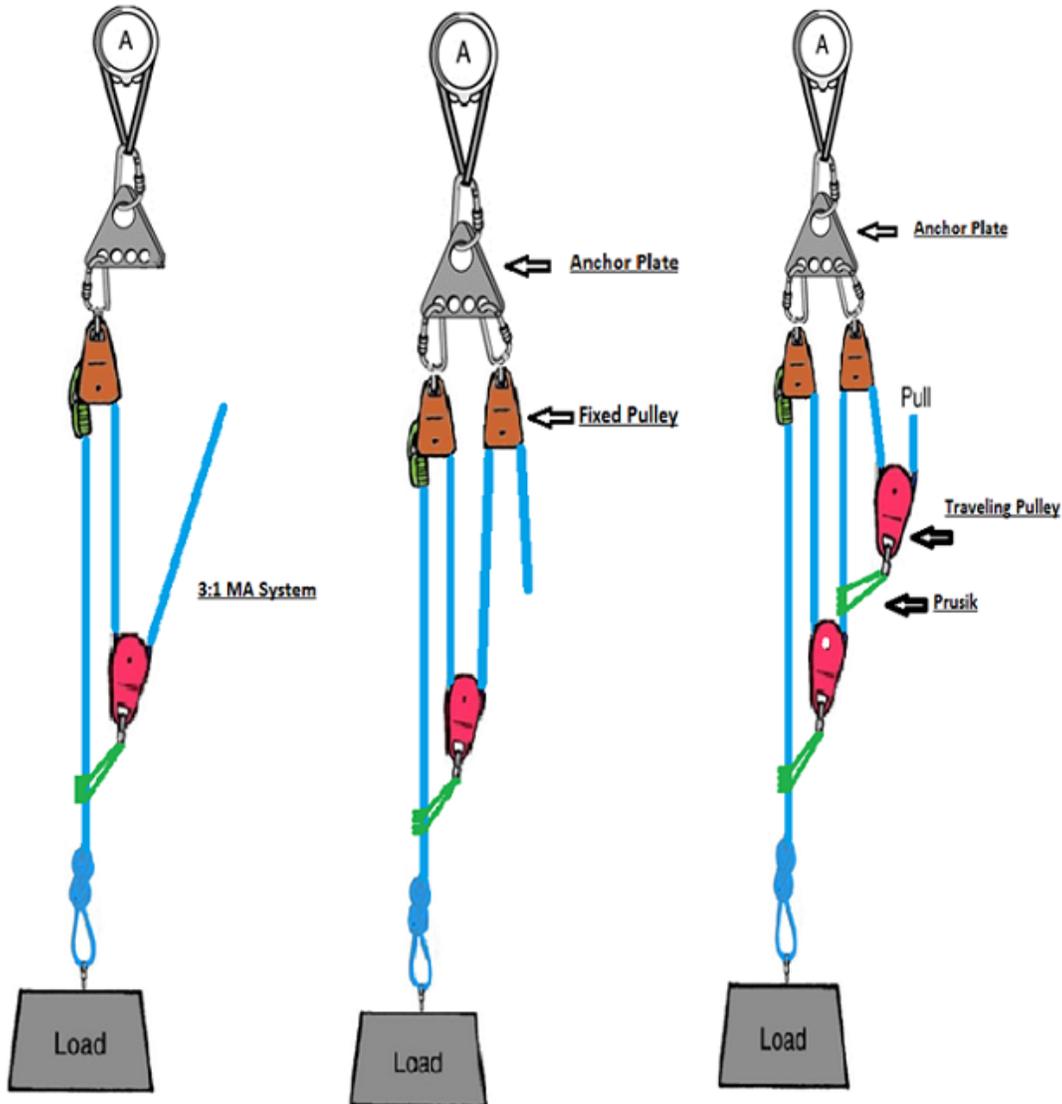


Figure 052-247-1306-1
6:1 Mechanical Advantage System

2. Construct a 9:1 compound mechanical advantage system.
 - a. Construct a 3:1 mechanical advantage system. (See task 052-247-1302)
 - b. Reave the rope around the sheave of a stationary pulley and attach it to the anchor plate with a carabiner.
 - c. Reave the rope around the sheave of a traveling pulley.
 - d. Attach a prusik to the load line.

e. Connect the traveling pulley to the prusik with a carabiner.



9:1 Mechanical Advantage System
Figure 052-247-1306-2

3. Conduct a system safety check. (See task 031-627-2152)

(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 Soldier: Tell the Soldier to construct a compound rope mechanical advantage system.

PERFORMANCE MEASURES	GO	NO-GO	N/A
1. Constructed a 6:1 mechanical advantage system.			
2. Constructed a 9:1 compound mechanical advantage system.			
3. Conducted a system safety check. (See task 031-627-2152)			

Supporting Reference(s):

Step Number	Reference ID	Reference Name	Required	Primary
	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 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.

Prerequisite Individual Tasks : None

Supporting Individual Tasks :

Task Number	Title	Proponent	Status
031-627-2152	Conduct a System Safety Check	031 - CBRN (Individual)	Approved
052-247-1302	Construct a Simple Rope Mechanical Advantage System for Rope Rescues	052 - Engineer (Individual)	Reviewed
031-627-2148	Construct a Single Point Anchor System	031 - CBRN (Individual)	Approved
052-247-1301	Tie Knots, Bends, and Hitches for Rope Rescues	052 - Engineer (Individual)	Reviewed

Supported Individual Tasks :

Task Number	Title	Proponent	Status
052-247-1331	Operate a Raising System	052 - Engineer (Individual)	Reviewed
052-247-1301	Tie Knots, Bends, and Hitches for Rope Rescues	052 - Engineer (Individual)	Reviewed
052-247-1307	Ascend a Fixed Rope System	052 - Engineer (Individual)	Approved

Supported Collective Tasks : None