

052-12N-1010
Construct a Berm with a Crawler Tractor
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 Fort Leonard Wood, MO/MSCOE foreign disclosure officer. This training product can be used to instruct international military students from all approved countries without restrictions.

Conditions: Given a mission to construct a berm, in an operational environment, given a crawler tractor with operator maintenance performed, an area marked with construction stakes, and all personal protective equipment. Some iterations of this task should be performed in MOPP 4.

Standards: Construct a berm with a crawler tractor to the given elevations contained on construction survey stakes maintaining a uniform surface and a slope of approximately 4:1 on the approach and exit slopes. Perform all pre-start safety procedures, and prepare crawler tractor for operation. Perform all steps adhering to all Warning and Caution statements in the TM without error and with no damage to equipment or injury to personnel.

Special Conditions: When excavating to "Support Defensive Operations", the ground/area for excavation to take place will typically not be marked with construction survey stakes.

Safety Risk: Low

MOPP 4: Sometimes

Task Statements

Cue: You have been given a mission to construct a berm with a crawler tractor.

DANGER

None

WARNING

None

CAUTION

None

Remarks: AS per AR 600-55, all military personnel and DA civilians must have an OF 346 and demonstrate their proficiency in order to operate this equipment.

Notes: None

Performance Steps

Remarks: Refer to task 052-12N-1006 for PMCS procedures.

1. Perform pre-start safety procedures.

a. Mount the crawler tractor.

Note: Maintain a minimum three-points of contact at all times, i.e., two feet and one hand or two hands and one foot.

(1) Enter operator's compartment from left side.

(2) Face machine when mounting and dismounting.

(3) Ensure ladders and grab handles are clean and secure before using them.

b. Utilize all Personal Protective Equipment (PPE).

c. Adjust left and right interior rearview mirrors.

d. Adjust the seat.

e. Fasten and adjust the seat belt.

f. Ensure left joystick is in NO STEER position.

g. Ensure parking brake is engaged.

h. Ensure all personnel are clear of machine.

WARNING

- To prevent injury, make sure that no maintenance work is being performed on or near machine.
- The monitoring system will perform an automatic self-diagnostic functional test whenever engine start switch is turned to the ON position. If action alarm does not sound or monitoring displays are not functioning, do not start engine. notify field maintenance. Failure to follow this warning may result in injury or death to personnel, as any warning category 3 notifications will not be relayed to the operator.
- Keep machine under control at all times in order to prevent injury. Reduce engine speed when you maneuver in tight quarters or when you break over a rise.
- Select gear range that is appropriate before you start downhill. Do not change gears when you are going downhill. Do not allow engine to overspeed when you are unloaded and moving down a slope. Watch tachometer and use service brakes. Use service brakes near the top of slope to prevent excessive engine speed.
- When you drive down a grade, use same gear used when driving up the grade.
- Machine will turn (counter-rotate) when transmission is in NEUTRAL, parking brake is disengaged, and left joystick (steering lever) is pushed forward or pulled rearward.
- Ensure all personnel are clear of machine before disengaging parking brake.
- Engage parking brake to lock left joystick and prevent machine movement.
- Do not allow riders on machine.
- If machine begins to sideslip, discard load and turn machine downhill.
Whenever possible, operate machine up and down slopes, not across slope.
- Always use a ground guide when moving machine up or down a ramp when loading/unloading. Failure to use a ground guide may result in an accident, causing death or injury to personnel or damage to equipment.
- Failure to follow these warnings may result in injury or death to personnel.

CAUTION

- Do not crank engine for more than 30 seconds. Allow starting motor to cool for two minutes before cranking again or damage to starting motor or batteries may result.
- Shut down engine if engine oil pressure does not register on gauge or if engine oil pressure indicator remains lit 10 seconds after start up.
- Failure to follow these cautions may result in engine damage.
- Although gear changes and directional changes at full engine speed are possible, deceleration and/or braking when you change direction is highly recommended. Failure to follow this caution may result in powertrain component failure.

2. Prepare crawler tractor for operation.

- a. Start the engine.
- b. Disengage parking brake and unlock joystick.
- c. Configure the crawler tractor to the travel position.

3. Excavate material.

Note: Refer to task 052-12N-1008 for excavation operations.

Before starting any work, walk the area to identify hazards and plan the job. Check for signs of buried utilities lines and pipes, always check overhead clearance. Obtain a digging permit when in CONUS and when available OCONUS to ensure utilities are marked.

4. Construct a berm with excavated material.

- a. Push as much material as possible.
- b. Continue working the length of the berm.
- c. Maintain a 4:1 on approach and exit slope.
- d. Maintain a uniform base during berm excavation.
- e. Repeat steps until the berm reaches desired height.

(Asterisks indicates a leader performance step.)

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

Evaluation Preparation: Setup: Provide all the items listed in the conditions section. Brief Soldier: Tell the Soldier to complete the performance measures according to the standards set forth in the task.

PERFORMANCE MEASURES	GO	NO-GO	N/A
1. Performed pre-start safety procedures.			
2. Prepared crawler tractor for operation.			
3. Excavated material.			
4. Constructed a berm with excavated material.			

Supporting Reference(s):

Step Number	Reference ID	Reference Name	Required	Primary
	AR 385-10	The Army Safety Program http://www.apd.army.mil/pdf/files/r385_10.pdf	Yes	No
	LO 5-2410-241-13	D7R Series II Dozer Type I with Winch (NSN 2410-01-565-2605) Lubrication Order D7R Series II Dozer Type I with Winch D7R Series II Dozer Type II with Ripper (NSN 2410-01-565-2603)	Yes	No
	TM 3-34.62	Earthmoving Operations (MCRP 3-17.71)	Yes	No
	TM 3-34.64	Military Soils Engineering	Yes	No
	TM 5-2410-241-10	Operator's Manual for D7R Series II Dozer Type I with Winch (NSN 2410-01-565-2605) D7R Series II Dozer Type II with Ripper (NSN 2410-01-565-2603)	Yes	Yes

TADSS : None

Equipment Items (LIN):

LIN	Name
DA152G	Helmet, Safety
J63269	GLOVES WRK LTHR BLK 4
C08735	BOOTS SAFETY 8R
T05016	Tractor, Full Tracked: Low Speed - T9 Type II with Ripper
HA4064	Goggles, Industrial
HA4006	Protector, Hearing

Material Items (NSN) :

Step ID	NSN	LIN	Title	Qty
	2410-01-565-2603	T05016	Tractor, Full Tracked, Low Speed: D7R Dozer with Ripper	1
	7920-00-205-1711		Rag, Wiping, Cotton, Unbleached, Mixed Color	1

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. It is the responsibility of all Soldiers and DA civilians to protect the environment from damage. Avoid unnecessary striping of vegetation and waterways. Control dust conditions and limit water erosion by dressing area at the end of each day. Explain the purpose of drip pans and their location under the equipment. Avoid unnecessary equipment usage and follow established procedures for cleanup of fluid leaks. Restore site and surrounding areas as close as possible to the original ecological condition.

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. Review local training area SOP. Know and adhere to all hand and arm signals. Perform an equipment walk-around before and after operation. Maintain three points of contact when mounting and dismounting. Wear goggles and gloves when checking batteries, hydraulic tank, and fueling the equipment. Wear hearing protection, kevlar / hard hats, safety boots and seat belts when operating or around running equipment. Do not wear loose clothing or jewelry. Utilize drip pans and always look in the direction of travel. Use caution when working on hills, banks, or steep slopes to avoid tipping. DO NOT place transmission in neutral to allow the equipment to coast.

Prerequisite Individual Tasks : None

Supporting Individual Tasks : None

Supported Individual Tasks : None

Supported Collective Tasks : None

Knowledges :

Knowledge ID	Knowledge Name
031-K-627-004	Knowledge of Personal Protection Equipment (PPE) and its uses
301-K-69	The operational environment.
011-1528K	knowledge of safety precautions in the workplace
K0601	Knowledge of Environmental Considerations
K0603	Knowledge of Notes, Warnings, and Caution statements
K0621	Operate Equipment Hydraulic Controls
K0622	Equipment Implement Travel Positions
K0619	Slowing/Stopping Equipment
052-K-00282	Know Safety Procedures
K0620	Up-shifting/Down-shifting Equipment
K0623	Read and Interpret Construction Grade Stakes
K0615	Knowledge of Equipment Fluid Capacities
052-K-00323	Know Construction Equipment Capabilities
K0612	Knowledge of Performing an Equipment walk Around Inspection
K0618	Maneuver across various types of Terrain
K0617	Starting/Stopping Equipment Engines
91L-K-140	Knowledge of the transmission gear select indicator location
K0616	Knowledge of how to Read, Interpret and Relay Hand and Arm Signals
K0607	Knowledge of Equipment Deficiencies
K0610	Knowledge of how to Obtain and Utilize the Appropriate Equipment Lubrication Order
K0609	Knowledge of how to Obtain and Utilize the Appropriate Equipment Technical Manual

Skills :

Skill ID	Skill Name
551-S-0048	Ability to read, interpret, and relay visual hand and arm signals
S0778	Locate, Read and Interpret Information Recorded on Grade Stake
101-S-M002	Ability to read, interpret and perform instructions.
052-S-00356	Recognize and Report Trends in an Operational Environment
S0603	Ability to Read, Comprehend, and Analyze Information on Instrument Panel Gauges
S0604	Ability to Read, Comprehend, and Perform Instructions in Equipment Technical Manuals
S0605	Ability to Read, Comprehend, and Perform Instructions in Equipment Lubrication Orders
S0601	Ability to Read and Comprehend Information on a Computer Screen
S0610	Coordinate Movement of Arms and Legs
S0611	Manipulate Hydraulic Controls
S0608	Ability to Read and Comprehend, and Comply with Environmental Considerations
91L-S-013	Read the Instrument Panel Gauges
S0609	Ability to Read, Comprehend, and Comply with Material Safety Data Sheets

ICTL Data :

ICTL Title	Personnel Type	MOS Data
12N10, Horizontal Construction Engineer, Skill Level 1	Enlisted	MOS: 12N, Skill Level: SL1, ASI: C4
12N20, Horizontal Construction Sergeant, Skill Level 2	Enlisted	MOS: 12N, Skill Level: SL2, Duty Pos: KLX