

551-88H-1527
Communicate with Hand/Arm Signals During Material Handling Equipment (MHE) Operations
Status: Approved

Security Classification: U - Unclassified

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 Eustis, VA 23608 foreign disclosure officer.

This training product can be used to instruct international military students from all approved countries without restrictions.

Conditions: Assigned as a Cargo Checker/Handler, Soldier must communicate with hand/arm signals during MHE operations. Given a completed risk assessment, all applicable publications, forms, and records, tools, materials, personnel, equipment in all weather conditions day or night in an operational environment.

Some iterations of this task should be performed in MOPP 4.

Standards: On orders; Soldier will communicate with hand/arm signals during MHE operations IAW TC 3-21.60, procedures and specifications utilizing the task Go/No-Go criteria. Comply with all warnings, cautions, and notes listed in all references. Soldier must perform this task with 100% compliance, without injury or damage to equipment.

Special Conditions: None

Safety Risk: Medium

MOPP 4: Sometimes

Task Statements

Cue: Assigned as a Cargo Checker/Handler, Soldier must communicate with hand and arm signals during MHE operations.

DANGER

None

WARNING

MODIFICATION HAZARD

Unauthorized modifications, alterations or installations of or to this equipment are prohibited and are in violation of AR 750-10. Any such unauthorized modifications, alterations or installations could result in death, injury or damage to the equipment.

HIGH PRESSURE HYDRAULIC SYSTEM HAZARDS

Hydraulic systems can cause serious injuries if high pressure lines or equipment fail. Never work on hydraulic systems or equipment unless there is another person nearby who is familiar with the operation and hazards of the equipment, and who can give first aid. A second person should stand by controls to turn off hydraulic pumps in an emergency. When the technicians are aided by the operators, the operators must be warned about dangerous areas.

MOVING MACHINERY HAZARDS

Be very careful when operating or working near moving machinery. Running engines, rotating shafts, and other moving machinery parts could cause personal injury or death.

ELECTRICAL HAZARDS

Whenever possible, the power supply to the equipment must be shut off before beginning work on the equipment. Do not be misled by the term "low voltage." Potentials as low as 50 volts may cause death under adverse conditions". Be careful not to contact 115-Vac input connections when installing or operating this equipment. Whenever the nature of the operation permits, keep one hand away from the equipment to reduce the hazard of current flowing through the body.

CAUTION

Ground guides should keep ten yards between themselves and the vehicles front, rear, and corners. They should never be directly in front of or behind the vehicle. Ground guides will not position themselves between the vehicle being guided and another object where an inadvertent engine surge or momentary loss of vehicle control could cause injury or death. Vehicle operators will immediately stop their vehicles if they lose sight of ground guides or notice that the guide is dangerously positioned between the vehicle and another object. Vehicle operators in such cases will secure their vehicle, dismount, and make an on-the-spot correction before continuing operations.

Remarks: None

Notes: None

Performance Steps

1. Perform this signal to indicate READY (see figure 81).

Note: HAND AND ARM SIGNALS should be given without gloves and hands must be away from the body.



Figure 81

Ready: Both Palms Open Hands on Head

2. Perform this signal to indicate MOVE LOAD SLOWLY (see Figure 82).



Figure 82
Move Load Very Slowly: Palms Facing Up Rub Palms Together

3. Perform this signal to indicate STOP ALL MOVEMENT (see Figure 83).
Note: OBEY a signal to STOP from anyone.



Figure 83
Stop All Movement: Both Fists Closed, Facing Forward Raised Above The Shoulder

4. Perform this signal to indicate BOOM UP (see Figure 84).



Figure 84

Boom Up: Fist Closed, Thumb Extended and Pointing Up

5. Perform this signal to indicate BOOM DOWN (see Figure 85).



Figure 85

Boom Down: Fist Closed, Thumb Extended and Pointing Down

6. Perform this signal to indicate BOOM OUT (see Figure 86).



Figure 86
Boom Out: Fist Closed, Thumbs Extended and Pointed Out

7. Perform this signal to indicate BOOM IN (see Figure 87).



Figure 87

Boom In: Fists Closed, Thumbs Extended and Pointing Inward

8. Perform this signal to indicate TURN LEFT or CRAB LEFT (see Figure 88).



Figure 88

Turn Left of Crab Left: Left Hand Open Palm Facing Forward and Pointing in Direction of Movement

9. Perform this signal to indicate TURN RIGHT or CRAB RIGHT (see Figure 89).



Figure 89

Turn Right or Crab Right: Right Hand Open Palm Facing Forward and Pointing in Direction of Movement

10. Perform this signal to indicate FORKS, HOOK, LOAD, or TOPHANDLER UP (see Figure 90).



Figure 90
Forks, Hook, Load or Tophandler Up: Forefinger Extended, Pointed Up

11. Perform this signal to indicate FORKS, HOOK, LOAD, or TOPHANDLER DOWN (see Figure 91).



Figure 91

Forks, Hook, Load or Tophandler Down: Forefinger Extended, Pointed Down

12. Perform this signal to indicate MOVE BOTH FORKS IN or TOPHANDLER INTO 20' POSITION (see Figure 92).



Figure 92

Move Forks In or Tophandler into 20' Position: Forefingers Extended and Pointed In

13. Perform this signal to indicate MOVE BOTH FORKS OUT or TOPHANDLER OUT TO 40' POSITION (See Figure 93).



Figure 93

Move Forks Out or Tophandler out to 40' Position: Forefingers Extended and Pointed Out

14. Perform this signal to indicate MOVE FORKS, LOAD RIGHT or SIDE SHIFT TOPHANDLER RIGHT (see Figure 94).



Figure 94

Move Forks, Load Right or Side Shift Tophandler Right: Left Hand Pointed Forward with Palm Facing In, Right Fist Closed with Forefinger Pointed to Palm of Left Hand

15. Perform this signal to indicate MOVE FORKS, LOAD LEFT or SIDE SHIFT TOPHANDLER LEFT (see Figure 95).

Note: Performance Steps 16 thru 19 are hand and arm signals for the (ATLAS) not to be used for the Kalmar (RTCH).



Figure 95

Move Forks, Load Left or Side Shift Tophandler Left: Right Hand Pointed Forward with Palm Facing In. Left Fist Closed with Forefinger Pointed to Palm of Right Hand

16. Perform this signal to indicate HOLD LEFT FORK MOVE RIGHT FORK IN (see Figure 96).



Figure 96

Hold Left Fork Move Right Fork In: Right Fist Closed, Left Forefinger Extended and Pointed to Right Fist

17. Perform this signal to indicate HOLD RIGHT FORK MOVE LEFT FORK IN (see Figure 97).



Figure 97

Hold Right Fork Move Left Fork In: Left Fist Closed, Right Forefinger Extended and Pointed to Left Fist

18. Perform this signal to indicate HOLD RIGHT FORK MOVE LEFT FORK OUT (see Figure 98).



Figure 98

Hold Right Fork Move Left Fork Out: Left Fist Closed, Right Forefinger Extended and Pointed Out

19. Perform this signal to indicate HOLD LEFT FORK MOVE RIGHT FORK OUT (see Figure 99).



Figure 99

Hold Left Fork Move Right Fork Out: Right Fist Closed, Left Forefinger Extended and Pointed Out

20. Perform this signal to indicate OSCILLATE LEFT SIDE UP RIGHT SIDE DOWN (see Figure 100).



Figure 100

Oscillate Left Side Up Right Side Down: Left Hand Displaying the V-Sign, and Pointed Down, Right Hand Displaying the V-Sign and Pointed Up

21. Perform this signal to indicate OSCILLATE RIGHT SIDE UP LEFT SIDE DOWN (see figure 101).



Figure 101

Oscillate Right Side Up Left Side Down: Left Hand Displaying the V-Sign, Pointed Up, Right Hand Displaying the V-Sign and Pointed Down

22. Perform this signal to indicate TILT LOAD OUT or FORKS UP (see Figure 102).



Figure 102

Tilt Load or Forks Up: Left Hand Displaying the V-Sign, and Pointed Up, Right Hand Pointed Up with Palm Facing Forward

23. Perform this signal to indicate TILT LOAD IN or FORK DOWN (see Figure 103).

Note: Performance Steps 24 and 25 are hand and arm signals for the Kalmar (RTCH) not to be used for the (ATLAS).



Figure 103

Tilt Load Down or Forks Down: Left Hand Displaying the V-Sign, and Pointed Up, Right Hand Pointed Down with Palm Facing Forward

24. Perform this signal to indicate LOCK TWISTLOCKS or HOOK UP COMPLETE (see Figure 104).



Figure 104

Lock Twistlocks or Hook Up Complete: Both Fist Facing Each Other

25. Perform this signal to indicate UNLOCK TWISTLOCKS or UNLOCK LOAD (see Figure 105).



Figure 105

Unlock Twistlocks or Unlock Load: Both Hands Extended Pointing In, Palms Facing Back

26. Perform this signal to indicate LEVEL LOAD, LEVEL FORKS, or LEVEL TOPHANDLER (see Figure 106).



Figure 106

Level Load, Level Forks or Level Tophandler: Right Hand Extended, Pointed In, Palm Facing Down

27. Perform this signal to indicate CENTER and LEVEL LOAD, FORKS, or TOPHANDLER (see Figure 107).

Note: Performance Step 28 and 29 are hand and arm signals for the Kalmar (RTCH) not to be used for the (ATLAS).



Figure 107

Center and Level Load, Forks or Tophandler: Right Hand Extended, Pointed In, Palm Facing Down, Left Hand Extended, Pointing Up, Palm Facing In

28. Perform this signal to indicate ROTATE RIGHT END OF LOAD or TOPHANDLER CLOCKWISE (see Figure 108).



Figure 108

Rotate Right End of Load or Tophandler Clockwise: Rotate Right Hand Palm Up, Left Forefinger Extended and Pointed in Direction of Movement

29. Perform this signal to indicate ROTATE LEFT END OF LOAD or TOPHANDLER COUNTER CLOCKWISE (see Figure 109).



Figure 109

Rotate Left End of Load or Tophandler Counter Clockwise: Rotate Left Hand Palm Up, Right Forefinger Extended and Pointed in Direction of Movement

(Asterisks indicates a leader performance step.)

Evaluation Guidance: Score the Soldier a GO if all performance measures are correctly completed/pass (P). Score the Soldier a NO-GO if any of the performance measures are missed or incorrectly performed/fail (F).

Evaluation Preparation: Test this task in with applicable training material. Ensure Soldier understands why this task is important to support the overall training objective.

Setup: Test this task in accordance with prescribed references or Technical Manual (TM).

Brief Soldier: Tell the Soldiers adhere to all Safety precautions when performing the task listed.

Note: Ensure that all required equipment to perform this task is available.

PERFORMANCE MEASURES	GO	NO-GO	N/A
1. Performed the signal to indicate READY.			
2. Performed the signal to indicate MOVE LOAD SLOWLY.			
3. Performed the signal to indicate STOP ALL MOVEMENT.			
4. Performed the signal to indicate BOOM UP.			
5. Performed the signal to indicate BOOM DOWN.			
6. Performed the signal to indicate BOOM OUT.			
7. Performed the signal to indicate BOOM IN.			
8. Performed the signal to indicate TURN LEFT or CRAB LEFT.			
9. Performed the signal to indicate TURN RIGHT or CRAB RIGHT.			
10. Performed the signal to indicate FORKS, HOOK, LOAD, or TOPHANDLER UP.			
11. Performed the signal to indicate FORKS, HOOK, LOAD or TOPHANDLER DOWN.			
12. Performed the signal to indicate MOVE BOTH FORKS IN or TOPHANDLER INTO 20' POSITION.			
13. Performed the signal to indicate MOVE BOTH FORKS OUT or TOPHANDLER OUT TO 40' POSITION.			
14. Performed the signal to indicate MOVE FORKS, LOAD RIGHT or SIDE SHIFT TOPHANDLER RIGHT.			
15. Performed the signal to indicate MOVE FORKS, LOAD LEFT or SIDE SHIFT TOPHANDLER LEFT.			
16. Performed the signal to indicate HOLD LEFT FORK MOVE RIGHT FORK IN.			
17. Performed the signal to indicate HOLD RIGHT FORK MOVE LEFT FORK IN.			
18. Performed the signal to indicate HOLD RIGHT FORK MOVE LEFT FORK OUT.			
19. Performed the signal to indicate HOLD LEFT FORK MOVE RIGHT FORK OUT.			
20. Performed the signal to indicate OSCILLATE LEFT SIDE UP RIGHT SIDE DOWN.			
21. Performed the signal to indicate OSCILLATE RIGHT SIDE UP LEFT SIDE DOWN.			
22. Performed the signal to indicate TILT LOAD OUT or FORKS UP.			
23. Performed the signal to indicate TILT LOAD IN or FORKS DOWN.			
24. Performed the signal to indicate LOCK TWISTLOCKS or HOOK UP COMPLETE.			
25. Performed the signal to indicate UNLOCK TWISTLOCKS or UNLOCK LOAD.			
26. Performed the signal to indicate LEVEL LOAD, LEVEL FORKS or LEVEL TOPHANDLER.			
27. Performed the signal to indicate CENTER and LEVEL LOAD, FORKS or TOPHANDLER.			
28. Performed the signal to indicate ROTATE RIGHT END OF LOAD or TOPHANDLER CLOCKWISE.			
29. Performed the signal to indicate ROTATE LEFT END OF LOAD or TOPHANDLER COUNTER CLOCKWISE.			

Supporting Reference(s):

Step Number	Reference ID	Reference Name	Required	Primary	Source Information
	TC 21-305-20	Manual for the Wheeled Vehicle Operator {AFMAN 24-306(I)}	Yes	No	
	TC 3-21.60	Visual Signals	Yes	Yes	
	TC 4-13.17	Cargo Specialist's Handbook	Yes	No	
	TC 55-60-17	TRAINING PROGRAM FOR THE 50,000-POUND ROUGH-TERRAIN CONTAINER HANDLER	Yes	No	
	TM 10-3930-673-10	OPERATORS MANUAL FOR ALL TERRAIN LIFTER ARMY SYSTEM (ATLAS) CLEAN BURN DIESEL 10,000 LB CAPACITY MODEL SKYTRAK 10,000M (NSN 3930-01- 417-2886)	Yes	No	
	TM 10-3930-675-10	OPERATOR'S MANUAL FOR ROUGH TERRAIN CONTAINER HANDLER (RTCH):RT 240; 53,000 LB CAPACITY; 4 X 4NSN 3930-01-473-3998NSN 3930-01-522-7364	Yes	No	
	TM 10-3930-680-10	LIGHT CAPABILITY ROUGHTERRAIN FORKLIFT (LCRTF)5K	Yes	No	

TADSS : None

Equipment Items (LIN): None

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. It is the responsibility of all Soldiers and DA civilians to protect the environment from damage. AR 200-1 delineates TRADOC responsibilities to integrate environmental requirements across Doctrine, Organization, Training, Materiel, Leadership and Education, Personnel and Facilities (DOTMLPF) and ensure all training procedures; materials and doctrine include sound environmental practices and considerations.

The Army's environmental vision is to be a national leader in an environmental and natural resource stewardship for present and future generations as an integral part of all Army missions. This Training Support Package meets this standard.

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 ATP-45.5 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 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. In a training environment, leaders must perform risk management in accordance with ATP 5-19, Risk Management. Leaders will complete a DD Form 2977 DELIBERATE RISK ASSESSMENT 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), as well as any other variables.

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.

No food or drink is allowed near or around electrical equipment (CPU, file servers, printers, projectors, etc.) due to possible electrical shock or damage to equipment. Exercise care in personal movement in and through such areas. Avoid all electrical cords and associated wiring. In event of electrical storm, you will be instructed to power down equipment.

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 ATP 3-11.32, NBC Protection, ATP 3-11.32, CBRN Decontamination.

Prerequisite Individual Tasks : None

Supporting Individual Tasks :

Task Number	Title	Proponent	Status
551-88H-1530	Operate 5K Light Capacity Rough Terrain Forklift (LCRTF) With a Load	551 - Transportation (Individual)	Approved
551-88H-1538	Operate ATLAS Rough Terrain Forklift With a Load	551 - Transportation (Individual)	Approved
551-88H-1537	Operate ATLAS Rough Terrain Forklift Without a Load	551 - Transportation (Individual)	Approved
551-88H-1532	Operate 5K Light Capacity Rough Terrain Forklift (LCRTF) Without a Load	551 - Transportation (Individual)	Approved
551-88H-1539	Operate RT240 Rough Terrain Container Handler (RTCH) Without a Load	551 - Transportation (Individual)	Approved

551-88H-1540	Operate RT 240 Rough Terrain Container Handler (RTCH) With a Load	551 - Transportation (Individual)	Approved
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Supported Individual Tasks : None

Supported Collective Tasks : None

Knowledges :

Knowledge ID	Knowledge Name
K-551-H-0002	Knowledge of communicating standard hand and arm signals
551-K-0087	How to operate material handling equipment
K-551-H-0227	Knowledge of all safety precautions

Skills :

Skill ID	Skill Name
S-551-H-0005	Ability to communicate commands by hand and arm signals
551-S-0152	Ability to communicate effectively
S4982	Ability to Communicate

ICTL Data : None