

101-92F-1421
Provide Petroleum Products using Refuel on the Move (ROM) Kit/Equipment
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 Lee, Va foreign disclosure officer. This training product can be used to instruct international military students from all approved countries without restrictions.

Conditions: In an operational environment (OE) given the requirement to perform Refuel On the Move (ROM) operations. Personnel and materials required to perform task: nine military occupational specialty (MOS)-qualified (92F) Soldiers; enough hoses, valves, and fittings to refuel up to eight combat vehicles at the same time (ROM Equipment); 5,000-gallon tank semitrailer; fuel source; 550-foot long by 150-foot wide area; a spill contingency kit; risk management procedures; applicable Safety Data Sheets (SDS); personal protective equipment (PPE); Facility Response Plan (FRP); Spill Prevention Control and Countermeasures (SPCC) plan; unit hazardous waste/hazardous material (HW/HM) management policy; unit tactical standing operating procedure (TSOP); oral or written operations order (OPORD); DA Form 2404 (Equipment Inspection and Maintenance Worksheet) or DA Form 5988-E (Equipment Inspection Maintenance Worksheet (EGA)); DA Form 3643 (Daily Issue of Petroleum Products), and full access to all reference materials. The area is secure, no enemy contact is expected, and vehicles to be refueled are on hand. This task should not be trained in MOPP 4.

Standards: Layout, assemble, perform operator's PMCS, operate, maintain fuel accountability record, and disassemble the ROM without damage to equipment or injury to personnel.

Special Conditions: None

Safety Risk: Low

MOPP 4: Never

Task Statements

Cue: None

DANGER

Failure to perform this task correctly may result in damage to equipment or injury or death to personnel.

WARNING: Due to safety considerations, normal vehicle refueling is done with the engine off. AR 385-55 states that commanders will apply all normal safety standards to their operations unless it is necessary to change due to the mission. In training situations, changes may be authorized only by the commander. Commanders will evaluate the significance of the assumed risk versus the training benefit. In combat operations, commanders will make decisions based on mission, enemy, terrain, troops, time available, civilian considerations (METT-TC) and risk analysis.

NOTE: In this task, as with any task involving extensive handling of petroleum products, make sure that equipment is on hand to contain and clean up spills. Unpack, inspect, and position the equipment for convenient access before beginning the task. Review the requirements of the task before performing it to ensure that drip pans and waste fuel containers are the appropriate size to contain waste fuel generated by the task. Use drip pans at any point that a spill is likely to occur (such as valves or nozzles). Continually observe equipment and take care while performing the task to minimize the possibility of petroleum spills. If a spill occurs, immediately stop operations and take steps to stop, contain, and clean up the spill. Report all spills immediately to your supervisor. Wear the appropriate PPE such as goggles, chemical protective gloves, and hearing protection as identified in the applicable reference (MSDS).

WARNING

None

CAUTION

None

Remarks: None

Notes: None

Performance Steps

1. Perform risk assessment measures according to health/safety task 101-92F-1160, per supervisor's guidance.
2. Employ Environmental Stewardship Measures according to shared task 101-000-0003.
3. Read and understand unit or installation standing operating procedures (SOP)/OPORD requirements for requisitioning, storing, handling, and disposing of hazardous materials.

CAUTION

Gloves, hearing protection, and goggles need to be worn when performing any fueling operation.

4. Wear appropriate PPE as required.
5. Perform before-, during-, and after-operations preventive maintenance checks and services (PMCS) on system's components according to appropriate technical manuals (TMs). Annotate on DA Form 2404 or DA Form 5988-E any faults found while performing PMCS.
6. Assemble ROM Equipment.
Note: The ROM is a concept that is equipment independent. As long as the concept is followed, any number of current equipment configurations can be used to do a ROM operation.
 - a. Spot 5,000-gallon tanker in designated area.
 - b. Ground tanker and place spill containers and fire extinguishers in position.
 - c. Make all necessary connections from tanker to T connection as follows:
Note: ROM systems can consist of either cam-lock fittings or unisex dry-brek fittings. The steps below are for cam-lock fittings. If unisex fittings are used, the sequence of the layout from tanker to T connection, main lines (left and right), and issue point does not change, only the components used.
 - (1) Connect reducer 4-inch female cam-lock to 3-inch male cam-lock to tanker discharge port.
 - (2) Connect discharge hose 3 inch by 50-foot (w/3 in. CAM Lock fitting and 2-inch unisex fitting) to discharge fitting on the tanker.
 - (3) Connect 2 x 2 x 2-inch T assembly (unisex) to end of discharge 2-inch (unisex) hose.
 - d. Consecutively lay out and assemble eight refuel points.
 - (1) Connect a 3 x 3 x 1 1/2-inch T assembly to a Quick acting valve assembly.
 - (2) Connect two 25-foot x 1 1/2-inch hoses to Quick acting valve assembly.
 - (3) Connect a 1 1/2-inch nozzle assembly to end of two 25-foot x 1 1/2-inch hoses.
 - (4) Position a spill container under nozzle and a fire extinguisher near it.
 - (5) Connect one 3-inch x 50-foot section of discharge hose to 3-inch T assembly.
 - (6) Connect one 3-inch x 25-foot section of discharge hose to 50-foot section.
 - e. Ground and hang all nozzles.
 - f. Perform before-operations PMCS on tanker pump in accordance with appropriate TM.
 - g. Gauge tanker.
 - h. Pack lines to each issue pont and visually check fuel.
 - i. Check system for leaks, loose connections, and safety hazards.

7. Operate ROM kit/Equipment.

Note: Gauge tanker prior to and after each convoy serial is refueled.

- a. Place spill container under nozzle port of vehicle.
- b. Connect bonding wire to vehicle being fueled before inserting nozzle.
- c. Signal noncommissioned officer in charge (NCOIC) that refueling can begin.
- d. On signals from NCOIC, start and stop pump for a predetermined time. Stop system immediately if leaks occur.
- e. When fueling is complete, remove nozzle from vehicle being refueled prior to removing bonding cable.
- f. Remove spill container from under nozzle port of vehicle.
- g. Ground guide vehicles out of refueling area.
- h. Record issue on DA Form 3643 (Daily Issues of Petroleum Products) according to DA Pamphlet 710-2-1.
- i. Clean up any spilled fuel immediately in accordance with local procedures for environmental protection.

8. Disassemble ROM Kit/Equipment.

- a. Close discharge valve on 5,000-gallon tanker.
- b. Evacuate hose line.
 - (1) Disconnect hose from discharge side of tanker. Ensure drip pans are in place to prevent fuel spillage.
 - (2) Connect hose to suction side of tanker.
 - (3) Start pump and open suction valve to create suction through hose.
 - (4) Hold nozzles open at refuel points.
 - (5) Once hoses are evacuated, close all Quick acting valves.

c. Load and stack equipment.

- (1) Disassemble hoses in reverse order of assembly.
- (2) Store hoses and other equipment in trailers according to load plan.

d. Check site for spilled fuel. Collect all fuel contaminated soil, other fuel contaminated materials, and waste fuel and dispose of them in an environmentally safe manner in accordance with local policies. Report any spills in accordance with procedures established in the ISCP and unit SOP.

9. Complete DA Form 2404 or DA Form 5988-E and DA Form 3643 and turn in to supervisor.

(Asterisks indicates a leader performance step.)

Evaluation Guidance: Score the Soldier GO if all performance measures are passed. Score the Soldier NO-Go if any performance measure is failed. If the Soldier scores NO-GO, show the Soldier what was done wrong and how to do it correctly.

Evaluation Preparation: See Task Conditions and Standards.

PERFORMANCE MEASURES	GO	NO-GO	N/A
1. Performed risk assessment measures according to health/safety task 101-92F-1160, per supervisor's guidance.			
2. Employed Environmental Stewardship Measures according to shared task 101-000-0003.			
3. Read and understood unit or installation standing operating procedures (SOP)/OPORD requirements for requisitioning, storing, handling, and disposing of hazardous materials.			
4. Wore appropriate PPE as required.			
5. Performed before-, during-, and after-operations preventive maintenance checks and services (PMCS) on system's components according to appropriate technical manuals (TMs). Annotate on DA Form 2404 or DA Form 5988-E any faults found while performing PMCS.			
6. Assemble ROM kit/Equipment.			
7. Operated ROM kit/Equipment.			
8. Disassembled ROM Kit/Equipment.			
9. Completed DA Form 2404 or DA Form 5988-E and DA Form 3643 and turn in to supervisor.			

Supporting Reference(s):

Step Number	Reference ID	Reference Name	Required	Primary
	AR 200-1	ENVIRONMENTAL PROTECTION AND ENHANCEMENT	No	No
	ATP 3-34.5	Environmental Considerations	No	No
	ATP 4-43	Petroleum Supply Operations	No	No
	DA FORM 2404	EQUIPMENT INSPECTION AND MAINTENANCE WORKSHEET	Yes	No
	DA FORM 3643	DAILY ISSUES OF PETROLEUM PRODUCTS	Yes	No
	DA FORM 5988-E	Equipment Inspection Maintenance Worksheet	Yes	No
	DA PAM 710-2-1 (Please don't use, link to the one in ATSC domain, the official one)	Using Unit Supply System (Manual Procedures)(Standalone Pub)	No	No
	STP 21-1-SMCT	SOLDIER'S MANUAL OF COMMON TASKS WARRIOR SKILLS LEVEL 1	No	No
	TM 10-4930-247-13&P	OPERATORS, UNIT AND DIRECT SUPPORT MAINTENANCE MANUAL INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST FOR HEMTT TANKER AIRCRAFT REFUELING SYSTEM MODEL HTARS100 (NSN 4930-01-365-2771) AND MODEL HTARS101 (49	No	No
	TM 9-2320-429-10	TRUCK, TANK, 8X8 M978 W/WINCH (NSN 2320-01-097-0249)(EIC B2C) M978 W/O WINCH (2320-01-100-7672)(EIC B2H)	No	No
	TM 9-2330-330-13	TECHNICAL MANUAL OPERATOR AND FIELD MAINTENANCE MANUAL FOR SEMITRAILER, TANK, 5000 GALLON, FUEL-DISPENSING, AUTOMOTIVE M969A3 NSN 2330-01-495-0043 (EIC CK5) M969A3P1 NSN 2330-01-538-8513 (EIC C6M)	No	No

TADSS : None

Equipment Items (LIN):

LIN	Name
S73372	Semitrailer Tank: 5000 Gallon Fuel Dispensing Automotive WE
R66273	Refueling System: Aviation HEMMT Tanker
X40831	Truck Cargo: 5 Ton 6x6 LWB W/E: M813
T87243	Truck Tank: Fuel Servicing 2500 Gallon 8x8 Heavy Expanded Mobility: M978

Materiel Items (NSN) :

Step ID	NSN	LIN	Title	Qty
	5330-00-088-9166		Gasket, Circular, 3-23/32 Inch Outside Diameter, 3 Inch Diameter Aperture	2
	4730-00-823-5316		Plug, Quick Disconnect, 2-13/16 Inch	8
	4730-00-109-2513		Coupling Half, Quick Disconnect, Male Coupling Half	1
	4730-00-075-2405		Tee, Flange	1
	4730-00-889-2382		Reducer, Quick Disconnect	1
	4820-01-102-8757		Valve Assembly, Quick Acting	8
	4210-00-257-5343	HA1002	Extinguisher, Fire (DISCONTINUED-USE 4210-01-290-0755)	8
	4730-00-640-6156		Cap, Quick Disconnect, 2-3/8 Inch	3
	5330-00-899-4509		Gasket, Solid Single or Composition	5
	4720-00-075-4771		Hose Assembly, Nonmettalic, Round	16
	4730-00-640-6188		Plug, Quick Disconnect, 2-1/8 Inch	3
	4730-00-929-0787		Cap, Quick Disconnect, 2-15/16 Inch	2
	4730-01-138-1526		Reducer, Quick Disconnect, 4-13/16 Inch	1
	4730-00-202-6490		Bushing, Pipe, Outside Hexagon or Octagon (Partial or Full Thread Optional)	1
	4720-00-864-0300		Hose Assembly, Nonmettalic, Round	7
	4730-01-096-1039		Coupling Half, Quick Disconnect, Tactical POL Distribution Equipment	8
	4720-00-083-0048		Hose, Liquid Petroleum Fuels, Dispensing, Collapsible Type 3,500 P.S.I.G. Minimum Burst	7
	4820-01-210-5605		Valve Assembly, Quick Acting	1
	4730-00-203-1010		Coupling Half, Quick Disconnect, Male Coupling Half	8
6.	4730-01-297-3765		COUPLING HALF,QUICK DISCONNECT	1
6.	4730-01-298-0150		COUPLING HALF,QUICK DISCONNECT	1
6.	4730-01-298-0151		COUPLING ASSEMBLY,QUICK DISCONNE	1
6.	4720-01-298-0732		HOSE ASSEMBLY,NONMETALLIC	1
6.	4730-01-297-6812		COUPLING HALF,QUICK DISCONNECT	1
6.	4930-01-290-0756		Nozzle, Fuel and Oil Servicing, 1-1/2 Inch Diameter, Automatic, Self-Closing	1
6.	4720-01-278-8973		SPARE PARTS KIT,HTARS	1
6.	4720-01-299-5983		HOSE ASSEMBLY,NONMETALLIC	1
6.	4730-00-951-3293		REDUCER,QUICK DISCONNECT	1
6.	5975-01-050-5707		ROD,GROUND	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.

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. Apply risk management programs, Verify that applicable Material Safety Data Sheets (MSDS) are maintained, Check the appropriate personal protective equipment (PPE) is being worn and maintained.

Prerequisite Individual Tasks : None

Supporting Individual Tasks :

Task Number	Title	Proponent	Status
101-92F-1408	Account for Petroleum Products	101 - Quartermaster (Individual)	Approved
101-92F-1405	Perform Quality Surveillance on Petroleum Products	101 - Quartermaster (Individual)	Reviewed
101-92F-1160	React to Petroleum Products Health / Safety Hazards	101 - Quartermaster (Individual)	Approved

Supported Individual Tasks : None

Supported Collective Tasks : None

Knowledges :

Knowledge ID	Knowledge Name
101-K-P10012	Knowledge of safety procedures when handling petroleum products
101-K-P10011	Knowledge of unit's SOP and local policy requirements and their location
101-K-P10010	Knowledge of Personal Protective Equipment (PPE) and its usage
101-K-P10008	Knowledge of Material Safety Data Sheets (MSDS)
K599	Know how to perform personal protective measures when handling petroleum products
101-K-P10007	Knowledge of Risk Management procedures and control measures
K596	Knowledge of petroleum products fire hazards and sources of ignition
K598	Know how to identify petroleum products health hazards
101-K-P10019	Knowledge of firefighting equipment and its uses
K597	Know how to perform first aid for petroleum products related injuries
101-K-P10017	Know how to read and interpret appropriate Field Manuals and Technical Manuals
101-K-P10016	Knowledge of the Environmental Stewardship Protection Program measures
101-K-M014	Know how to perform PMCS on equipment used.
101-K-P10029	Know how to manually sample petroleum products and perform quality surveillance
K22368	Know how to perform Preventive Maintenance Checks and Services (PMCS) on refuel on the move (ROM kit/equipment) components IAW appropriate TM
101-K-P10018	Knowledge of Preventive Maintenance Checks and Services (PMCS) procedures
K7913	Recognize Inhalation Hazards
031-K-627-021	Knowledge of Occupational Safety and Health Administration (OSHA) 29 CFR 1910.120 requirements
101-K-M002	Know how to identify risks and hazards.
K641	Know how to prepare petroleum accountability forms (DA Form 3643, 2765-1, and DD Form 1898)
101-K-P10032	Know how to complete DA Form 2404, 5988-E, 5987-E, 3643, DD Form 1970 and 1898
101-K-P10031	Knowledge of Refuel on the Move (ROM) equipment and its usage

Skills :

Skill ID	Skill Name
101-S-P10018	Ability to read and interpret appropriate Field Manuals and Technical Manuals
101-S-P10017	Ability to apply Environmental Stewardship Protection Program measures
101-S-P10013	Ability to apply safety procedures when handling petroleum products
101-S-P10011	Ability to wear Personal Protective Equipment (PPE)
101-S-P10007	Ability to apply Risk Management procedures and control measures
S1611	Ability to prepare petroleum accountability forms (DA Form 3643, 2765-1, and DD Form 1898)
S1577	Ability to identify petroleum products fire hazards and sources of ignition
101-S-10009	Ability to determine safety measures from Material Safety Data Sheets (MSDS)
101-S-P10033	Ability to complete DA Form 2404, 5988-E, 5987-E, 3643, DD Form 1970 and 1898
101-S-10008	Ability to extract information from Material Safety Data Sheets (MSDS)
101-S-P10032	Ability to inspect and properly use Refuel on the Move (ROM) equipment
S1578	Ability to perform first aid for petroleum products related injuries
101-S-P10030	Ability to manually sample petroleum products and perform quality surveillance
S1579	Ability to identify petroleum products health hazards
S0199	Recognizing risks and hazards
S2542	Ability to perform Preventive Maintenance Checks and Services (PMCS) on refuel on the move (ROM kit/equipment) components IAW appropriate TM
S0982	Ability to identify resource requirements for conducting ROM refueling operations using petroleum tank vehicles
101-S-P10019	Ability to perform Preventive Maintenance Checks and Services (PMCS)
101-S-P10020	Ability to inspect and properly use firefighting equipment

ICTL Data :

ICTL Title	Personnel Type	MOS Data
92F Petroleum Supply Specialist SL10	Enlisted	MOS: 92F, Skill Level: SL1, Duty Pos: QFQ