



# ORIGINAL

## UNITED STATES MARINE CORPS

MARINE CORPS AIR STATION

BEAUFORT, SOUTH CAROLINA 29904-5000

ASO P10340.11A

FUELS

9 April 1993

### AIR STATION ORDER P10340.11A (Ch-1)

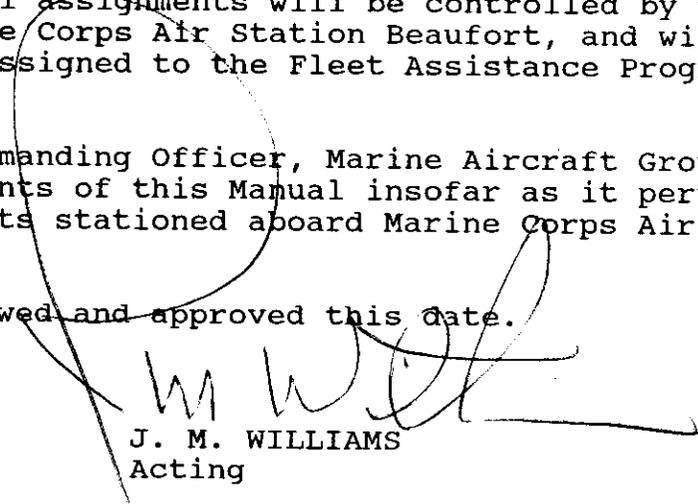
From: Commanding Officer  
To: Distribution List

Subj: STANDING OPERATING PROCEDURES FOR FUELS BRANCH

Ref: (a) NAVAIR 00-80T-109 (NATOPS)  
(b) CFR 29  
(c) NAVSEA OP 2239  
(d) MIL-HD 200G (NOTAL)  
(e) MIL-HD 201B (NOTAL)  
(f) NAVAIR INST 10340.3 (NOTAL)  
(g) DOD 4140.25M (NOTAL)

Encl: (1) LOCATOR SHEET

1. Purpose. To establish policy and procedures for the Fuels Branch, Supply Department, Marine Corps Air Station (MCAS), Beaufort, South Carolina.
2. Cancellation. ASO P10340.11.
3. Scope. This Manual applies to the organization, internal procedures and individual responsibilities for receipt, storage and distribution of aviation/automotive fuels under custodial control of the Supply Officer, Marine Corps Air Station Beaufort.
4. Responsibility. The fuels operations as outlined by this Manual will be conducted under the cognizance of the Air Station Supply Officer. Personnel assignments will be controlled by the Commanding Officer, Marine Corps Air Station Beaufort, and will include those personnel assigned to the Fleet Assistance Program (FAP).
5. Concurrence. The Commanding Officer, Marine Aircraft Group 31 concurs with the contents of this Manual insofar as it pertains to Fleet Marine Force units stationed aboard Marine Corps Air Station Beaufort.
5. Certification. Reviewed and approved this date.

  
J. M. WILLIAMS  
Acting

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distribution is unlimited.



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UNITED STATES MARINE CORPS  
Marine Corps Air Station  
Beaufort, South Carolina 29904-5001

ASO P10340.11A Ch 1  
SUFU  
6 Jun 98

AIR STATION ORDER P10340.11A Ch 1

From: Commanding Officer  
To: Distribution List

Subj: STANDING OPERATING PROCEDURES FOR FUELS BRANCH

Encl: (1) New page inserts to ASO P10340.11A of 9 April 1993

1. Purpose. To transmit new page inserts to the basic Order.
2. Action. Remove pages 4-3, 6-3, 6-4, and 7-3 of the basic Order and replace with corresponding pages contained in the enclosure.
3. Change Notation. Paragraphs denoted by an asterisk (\*) symbol contain changes not previously published.
4. Filing Instructions. File this Change transmittal immediately behind the signature page of the basic Order.

M. W. FISHER, JR.  
Executive Officer

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## STANDING OPERATING PROCEDURES FOR FUELS BRANCH

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STANDING OPERATING PROCEDURES FOR FUELS BRANCH

CHAPTER 1

MISSION AND ORGANIZATION

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### CHAPTER 1

#### MISSION AND ORGANIZATION

1000. GENERAL. A standing operating procedure enables the Air Station Fuels Branch personnel to readily determine their responsibilities and provides a guide for the daily operation of the Fuels Branch within the Supply Department.

1001. MISSION. The primary mission of the Supply Department Fuels Branch is to receive and store ground and aviation petroleum products for distribution to Air Station and visiting aircraft/vehicles.

1002. ORGANIZATION. The Supply Officer exercises operational control of the Air Station Supply Branch. The Fuels Branch is under the operational control of the Supply Officer. The Fuels Branch Officer will discharge his responsibilities through planning, direction and supervision of a completely integrated fuel operation. The Airfield Operations Officer controls the establishment of priorities for aircraft fuel delivery services. Personnel are assigned to sections or branches within the Fuels Branch as directed by the Fuels Officer. The supervisory and support personnel required to support these sections are the Fuels Officer, Fuels Noncommissioned Officer (NCO), Fuels Quality Assurance (QA) Representative and assigned cognizant Noncommissioned Officer in Charge (NCOIC).

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## STANDING OPERATING PROCEDURES FOR FUELS BRANCH

### CHAPTER 2

#### INDIVIDUAL RESPONSIBILITIES

2001. SUPPLY OFFICER. The Supply Officer is designated as the operating custodian and is responsible for the operation of the MCAS Beaufort Fuels Branch. The Supply Officer will account for all products delivered or handled by the branch and will assign a Fuels Officer to ensure operating personnel are qualified and comply with all applicable orders and procedures pertaining to the operation of associated equipment.

2002. FUELS OFFICER. The assigned Fuels Officer shall have overall responsibility for fuels operations, fuels handling, safety, accounting, training, maintenance of facilities and the operations of fuels liquid gas systems. The Fuels Officer will ensure compliance with references (a), (b) and (c).

2003. FUELS DISTRIBUTION SYSTEM NCOIC. As assistant to the Fuels Officer, the Fuels Distribution System NCOIC is responsible for the routine operation of the Fuels Branch, the mechanical operations of the facilities and equipment, proper training of personnel and safe work practices. These responsibilities include:

1. Receipt of bulk fuel at waterfront, railroad sidings and truck unloading sites.
2. Distribution of bulk petroleum products.
3. Operation of the automotive service station.
4. Operator maintenance of facilities and equipment.
5. Generating requests to the Public Works Department for performance of corrective maintenance.

2004. FUELS QUALITY ASSURANCE (QA) REPRESENTATIVE. The QA representative is responsible for the inspection, surveillance and quality control of all products received, stored transferred and issued by Fuels Branch. This will include:

1. Inspection, gauging and sampling of bulk petroleum products in accordance with references (a), (d), (e) and (f).

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2. Inspection and approval of storage tanks and fuel tank trucks.
3. Surveillance of all fuel handling methods to ensure control throughout all operations.
4. Performing continuous on-the-job training of military and civilian personnel in the fuel handling process.
5. Acting in the capacity of a fuels safety supervisor and ensuring that all existing fuel regulations are enforced at all times, immediately reporting violations to the Fuels NCOIC.

2005. FUELS INVENTORY CONTROL CLERK. The Fuels Inventory Control Clerk is responsible to the Fuels Officer for the maintenance of timely and accurate records of all fuel transactions. This will include:

1. Responsibility for all administrative matters.
2. Handling of documents for receipt, issue, transfer and storage.
3. Maintaining daily inventory records.
4. Compilation and preparation of all reports on Fuels Branch operations.
6. Inventory of all petroleum products received, stored, transferred and issued by the Fuels Branch, determining requirements and scheduling replenishment.

2006. FUELS SERVICING SECTION NCOIC. The Fuels Servicing Section NCOIC is responsible for safety, training and operation of all Fixed Place Rapid Jet Pantograph refuelers. The NCOIC will ensure that each unit is operated in accordance with reference (a) and that all personnel are properly indoctrinated with current safety regulations. Violations of existing safety regulations will be reported immediately to the Fuels Chief. The Fuels Servicing Section NCOIC is also responsible for operation of aircraft truck fueling facilities, the performance of operator maintenance (first echelon) on assigned fuel handling equipment and maintaining records of quantities of fuels handled. The Fuels Servicing Section NCOIC will be responsible for complete and adequate training of all military and civilian personnel assigned, to specifically include fuel safety precautions in accordance with reference (a).

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CHAPTER 3

FIXED PLACE RAPID JET PANTOGRAPH SYSTEM

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### CHAPTER 3

#### FIXED PLACE RAPID JET PANTOGRAPH SYSTEM

##### 3000. FIXED PLACE RAPID JET PANTOGRAPH SYSTEM

1. Information. Reference (a) promulgates a handbook for aircraft refueling. Reference (b) publishes general safety precautions for use within the Naval establishment. Reference (f) establishes guidelines for maintaining quality and limiting contamination of aircraft fuels.
2. Instructions. A copy of these procedures will be posted near the Fixed Place Rapid Jet Pantograph System. All personnel are required to read and comply with the contents contained herein and applicable references.
3. Concept. The concept for operation of the Fixed Place Rapid Jet Pantograph System is to maintain the capability to refuel one jet aircraft at each of eight refueling stations using the following procedures:
  - a. All aircraft handling will be accomplished by aircraft maintenance personnel attached to the squadron that is operating the aircraft. The squadron will furnish sufficient plane handlers, chocks and tow tractor drivers. These personnel will remain on station until all their aircraft have been refueled.
  - b. Pilots will enter the refueling station (hot refueling pits) entrance via the high speed taxi ways after stopping first at the de-arming area, if returning from an ordnance sortie. At no time (except in case of emergencies) will aircraft be shutdown on the taxi way.
  - c. Prior to entering the refueling station, the aircraft will stop for a "hot wheels and brakes" check by plane handlers. No aircraft will enter the refueling station unless a ground crew is available to guide the aircraft in and out.
  - d. Upon signal from the plane handler, the aircraft will be taxied to a designated position in the refueling station. At no time will aircraft make turns exceeding 45 degree wheel clearance while in the refueling station.
  - e. A guide line leading to each refueling pit shall be painted on the concrete as a spotting guide for the aircraft. If the position of the guidelines does not allow for a 5 foot clearance between aircraft requiring fueling, then only one aircraft will be fueled per station. Fixed-wing and rotary aircraft will

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not be taxied into adjacent refueling pits. Aircraft must be spaced to allow immediate unobstructed removal in the event of fire.

f. Refueler services will normally be available from 0700 to 1600 in the East and West stations, Monday through Friday, except holidays. Commencing at 1600, one station will secure while the other remains open until 2300 or field closure. In the event of personnel shortages, one station will be open and will remain open until field closure. On weekends and holidays, hot refueling services will be available during field operating hours only. The Airfield Operations Duty Officer will be notified when there is a change in pit status. Hot refueling requirements after field operating hours will be coordinated through the Air Station Officer of the Day.

4. General. The Commanding Officer of each aircraft squadron, utilizing the Fixed Place Rapid Jet Pantograph System, will ensure that aircraft maintenance personnel are qualified and follow all applicable orders and procedures pertaining to the aircraft handling phase of the refueling operations. Liaison with refueler personnel is authorized and encouraged. Squadron personnel will be trained by refueler personnel and the Fire Department in the proper use of fire fighting equipment provided at the refueling pits. Squadron Commanders will appoint a Squadron Refueling Supervisor to train and monitor plane handlers who will be involved in the refueling evolution of squadron aircraft.

5. Maintenance

a. All repairs and overhaul of equipment, beyond operator's first echelon maintenance, will be accomplished by the Air Station Public Works Department.

b. Daily equipment inspection procedures will be in accordance with paragraph 3001 of this chapter and the Fixed Place Rapid Jet Pantograph System Preventive Maintenance Check List.

3001. SAFETY PRECAUTIONS. General safety precautions pertaining to aircraft fuel handling are covered in reference (a) and Chapter 8 of this Order. Before refueling an aircraft, all equipment will be inspected and defective items replaced. Specific safety precautions peculiar to Fixed Place Jet Pantograph System operations are as follows:

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1. Fire. Should a fire occur, close all valves, including pushing the "emergency off" switch, notify the Crash Crew and Fire Department immediately by activating the emergency fire alarm near the fueling lanes and then, if safely able, attempt to tow or have the aircraft taxied away from the refueling islands.
2. Personnel Requirements. A minimum of two refueler personnel will be available at all times when the Fixed Place Rapid Jet Pantographs are activated. One person will remain in the immediate vicinity of the day tanks at all times to control the master switches. This person must be thoroughly familiar with all emergency procedures.
3. Fuel Spill. If a large fuel spillage (over 6 feet in diameter) occurs, the engines of the aircraft being fueled shall be shutdown and the remaining aircraft in the station shall be taxied clear of the area.

3002. OPERATING INSTRUCTIONS FOR HOT REFUELING

1. Personnel. Maximum personnel and equipment required for pressure refueling of fixed wing aircraft with engines running are as follows:

a. One plane captain nozzle operator or a qualified substitute (squadron provides).

b. One refueler operator (Fuels Branch). The use of one refueler operator to refuel two aircraft simultaneously is "prohibited."

c. One fire watch operator (squadron provides).

d. One aircraft pilot (squadron or visiting aircraft personnel).

e. One refueling coordinator (squadron provides) used only when nozzle operator and pilot is out of the line of sight of refueler operators.

2. Equipment

a. One refueling nozzle, military standard per aircraft.

b. One aircraft ladder per aircraft, if required.

c. One nose wheel steering bar per aircraft, if required.

d. Wheel chocks, hose stowage racks, fuel vent boots, swabs and ear protectors.

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e. Fire protection provided by one or more Halon units.

3. Aircraft Hot Refueling Preparation Sequence. The following shall be accomplished in the sequence indicated:

a. Chock aircraft wheels.

b. Connect grounding and bonding cables.

c. Attach refueling nozzle.

d. Determine if the aircraft is ready to receive fuel. Gravity refueling with the hand nozzle will not be permitted with aircraft engine(s) running. All extraneous electrical equipment should be secured and radio transmissions kept to a minimum.

e. Determine from the plane captain the quantity of fuel, if possible.

f. Open fuel delivery valve.

g. Open nozzle valve.

h. Perform aircraft valve check, as applicable.

i. Indicate completion of refueling by appropriate hand signal(s).

j. Close nozzle and fuel delivery valve.

k. Evacuate hose.

l. Disconnect nozzle.

m. Disconnect ground wire.

n. Stow hose.

o. Signal for brake(s) to be held.

p. Remove chocks.

q. Ensure area is clear of equipment and personnel.

r. Signal for taxi out.

s. The refueler will fill out a Single Line Requisition Form DD 1348-6 or Fuels Into-Plane Contract Sales Slip DD 1898, for all visiting aircraft, or Rapid Jet Issue Sheet for assigned or tenant Air Station aircraft, with the following information:

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- (1) Squadron
- (2) Aircraft bureau number
- (3) Amount and type of fuel
- (4) Signature of plane captain
- (5) Date
- (6) Refueler's name

4. During hot refueling, only one aircraft at a time will be allowed at each refueling station. Additional aircraft will await a vacancy on the taxi strip closest to their station. Waiting aircraft will keep engines running and allow sufficient room for other aircraft to pass. Except in cases of emergencies (i.e., fire) aircraft will not shutdown on the taxi strip.

3003. OPERATING INSTRUCTIONS FOR PROBE REFUELING

1. Operating Procedures. Probe refueling is a unique and very dangerous method sometimes used by the squadrons to hot refuel their aircraft. During this operation, it is imperative that all previously stated safety precautions are strictly adhered to. Probe refueling will be conducted in the following sequence:

a. The aircraft shall be positioned parallel to the refueling unit with the maximum clearance allowed by the hose length. The nose wheel and one main gear wheel shall be chocked prior to refueling.

b. Two aircraft will not be fueled at the same time, unless two fuel operators are on hand. Additional aircraft shall hold clear of station aisle to be capable of taxiing clear of station area, if necessary.

c. The ground wire shall be attached to the aircraft before the refueling adapter is attached to the probe.

d. Canopy will be down and locked prior to refueling.

e. The plane captain utilizing a suitable work stand shall lock the probe refueling adapter to the probe and then signal the fuel operator when ready to receive fuel.

f. After completion of fueling, the plane captain will unlock the adapter from the probe and the work stand will be moved clear of the fueling site and secured. The work stand shall be kept clear of the fueling location until the next aircraft is in position and locked.

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g. The plane captain will signal the refueler operator by a cut signal in the daytime and by flashlight at night when refueling is completed. The refueler operator will signal the nozzle operator. The nozzle operator will close the valve on the nozzle but will not remove the probe adapter until the station operator has evacuated all fuel from the hose.

h. The ground wire shall be detached after all other refueling equipment is removed.

i. A qualified plane handler will direct the aircraft out of the station. If "hot refueling" is being conducted, the plane handler will ensure that the aircraft on the furthestmost right-hand position in the pits will taxi first so as to eliminate a possible FOD hazard.

3004. OPERATING INSTRUCTIONS FOR COLD REFUELING

1. Cold Refueling. Cold refueling is defined as the refueling of aircraft with engines shutdown. Procedures for checking out the aircraft, entry into the fueling station and fueling operations are the same as for hot refueling with the following exceptions:

a. Engines are shutdown.

b. The nose wheel steering bar is attached to the aircraft prior to refueling operations.

c. A tow tractor is standing by in the immediate area to remove the aircraft in case of fire.

d. All radio and radar equipment will be shut off. If engines are shutdown it shouldn't work anyway, unless electrical unit is attached.

e. Aircraft may stack two deep in each fuel station if a tow tractor is standing by. Enough distance for removal must be maintained between aircraft.

f. One refueler may fuel only one aircraft at a time during cold refueling.

g. Self-starting aircraft may be allowed to start while in the station at the discretion of the fuels section leader, if there are no fuel spills in the vicinity of the aircraft and there are no aircraft or ground support equipment within 100 feet of the rear of the aircraft.

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3005. OPERATING INSTRUCTIONS FOR OVER THE WING REFUELING

1. Operating Procedures. Procedures for over the wing refueling are the same as for cold refueling with the exception of the following:

a. The hand nozzle will be touched to an unpainted surface of the aircraft prior to opening the fueling port and will remain in contact with the fueling port when being used.

b. Hand nozzles will not be locked or wedged in the open position, but will be held open by hand.

c. The dust cap will be replaced when refueling is finished.

d. The plane captain and crew will not be in the aircraft during the refueling operation.

3006. DUTIES AND RESPONSIBILITIES OF PERSONNEL

1. Section Leader. Section leaders will be assigned by the Fuels Servicing Section NCOIC. They will thoroughly understand all signals used by squadron personnel during refueling operations. The section leader is responsible for the following:

a. Completion of the daily preventive maintenance sheet on each refueling unit.

b. Constantly check both the island operators and aircraft refueling personnel to ensure compliance with safety rules.

c. Ensure correct accounting of all fuel issued by this section and compliance with quality control procedures.

d. If fire occurs, the section leader will assure that all fuel shutoff valves are closed, and that hoses have been evacuated and removed from aircraft, that fire alarm switches have been activated, and will direct proper fire fighting techniques until the arrival of the crash crew.

e. Prior to refueling an aircraft, the section leader shall ensure the following:

(1) Stations are manned by the required number of personnel.

(2) Aircraft does not have hot brakes.

(3) Wheels are chocked.

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(4) Grounding wire is properly attached.

f. The Section Leader will secure refueling operations when:

(1) Safety of continued operation is questionable.

(2) Fuel spillage occurs (6 feet in diameter).

(3) Sufficient number of squadron personnel are not on hand.

(4) Whenever the Airfield Operations Officer or his designated representative secures the station in the event of lightning within a 5 nautical mile radius of Marine Corps Air Station Beaufort.

2. Station Operator. The station operator will operate valves and hose evacuation levers, inspect grounding cable and check the unit for leaks and defects. The station operator will be familiar with the hand signals used in the refueling operation and will ensure adherence to all safety rules. If a discrepancy is noted in safe handling practices, the station operator will stop the operation and contact the section leader. If a fire occurs, the station operator will close all valves and evacuate the hose, activate the emergency fuel shutoff, activate the fire alarm and, if safely able, assist in extinguishing the fire.

a. To commence the fueling operation, the station operator will turn the meter to the zero position and then open the fuel delivery valve.

b. To secure fueling operations, the operator will close the delivery valve and evacuate the hose.

c. Upon completion of each fueling operation, the station operator will accurately record the amount of fuel delivered in accordance with paragraph 3002 subparagraph 3 of this chapter.

d. At no time will fuel be issued at more than 55 PSI.

3. Plane Captain/Coordinator. The plane captain/coordinator will be assigned by the squadron being serviced. He will represent the squadron in all functions relating to their assigned aircraft and will be responsible for the following:

a. Each nozzle that is being utilized for refueling respective aircraft is appropriately manned at all times.

b. Hose and nozzles are carefully handled and replaced on the Pantograph unit.

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c. Maintenance and repair work are not conducted on aircraft while at the station (this is not to preclude pre- and post-flight procedures).

d. Aircraft are checked for hot brakes and are de-armed before entering the station.

e. Thoroughly understand and comply with instructions pertaining to aircraft refueling.

f. Discontinue refueling when safety of operations is doubtful.

g. Discontinue refueling for removal of fuel spillage (when 6 feet in diameter or profuse).

h. Inspect condition of island area and all support equipment.

i. Signal the pilot when chocks are installed.

j. Ensure that nozzle is properly connected.

k. Direct and position aircraft into assigned station.

l. Act as the fuel vent monitor as necessary.

m. Ensure the removal of the fuel hose.

n. Confirm the quantity of fuel received and sign for it.

o. In the event of fire in or around the aircraft, the plane captain/coordinator shall take the following action immediately:

(1) Direct the operator to activate the emergency shutoff valve.

(2) Activate the fire alarm.

(3) If safely able, have aircraft removed from refueling area as soon as possible.

(4) If safely able, assist the operator in extinguishing the fire.

4. Fuel Nozzle Operator. The fuel nozzle operator must be thoroughly trained in aircraft refueling and be responsible for the following:

a. Must handle the refueling hose and properly attach and operate single point and service type nozzles into the aircraft.

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b. Will man the nozzle lever handle during the refueling of aircraft.

c. Will close the nozzle lever handle when an aircraft is refueled and will not remove the nozzle from the aircraft until the station operator evacuates the hose.

d. Will carefully remove the nozzle and return it to the Pantograph unit.

e. In case of fire, the fuel nozzle operator will remove the hose to a safe area.

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CHAPTER 4

MOBILE REFUELING AND DEFUELING OPERATION

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## STANDING OPERATING PROCEDURES FOR FUELS BRANCH

### CHAPTER 4

#### MOBILE REFUELING AND DEFUELING OPERATION

##### 4000. MOBILE REFUELING AND DEFUELING OPERATION

1. Information. Reference (a) promulgates a handbook for aircraft refueling. Reference (b) publishes general safety precautions for use within the Naval establishment. Reference (c) pertains to handling and storage of liquid propellants. Reference (d) establishes guidelines for maintaining quality and limiting contamination of aircraft fuels.

2. Instruction. A copy of this SOP is available at the Fuels Office, Building 620. All Fuels Branch personnel are required to read and comply with the contents and references contained herein.

3. \*Utilization. Mobile aircraft refueler/defueler services will normally be available utilizing Air Station assets from 0700 to 2300 Monday through Friday. From 2300 to 0700, Monday through Friday, and during weekends and holidays, limited mobile refueling/defueling will be available. All requests for refueling/defueling will be made to Air Station Mobile Refueling dispatcher, ext. 6224/6822/6823/6824.

##### 4001. DUTIES AND RESPONSIBILITIES OF PERSONNEL

1. Dispatcher. The dispatcher's primary responsibility is the relaying of requests for mobile refueler drivers in a logical, expeditious manner. Refueler drivers have a 15 minute response time. The dispatcher will ensure mobile refueler vehicles are "topped off" as required and preventive maintenance inspections (PM's) are performed correctly. He is also responsible for log books and tally sheets which will be reviewed by dispatcher for correctness and neatness. The dispatcher is the person in authority to control refueling operations. The dispatcher is expected to carry himself in a professional, sober manner at all times.

2. Refuelers Driver. Drivers are responsible for safe, expeditious delivery of fuel to various squadrons. Refueler drivers will PM vehicles prior to movement of vehicles. Refueler drivers will complete all paperwork in a neat, accurate manner. Upon request from dispatcher, refueler drivers will police the area, gauge tanks, wash and wax vehicles, etc. A cooperative, professional manner is expected from refueler drivers at all times.

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dispatcher, will police the area, gauge tanks, wash and wax vehicles, etc. A cooperative, professional manner is expected from refueler drivers at all times.

3. Miscellaneous. Government vehicles and equipment will only be used to support the refueling efforts of the branch. No vehicles or equipment will be used for any other reason. The dispatcher will be responsible for the proper use and conduct of all equipment and personnel.

4002. OPERATING INSTRUCTIONS FOR MOBILE REFUELERS SYSTEM

1. General. Because mobile refuelers and defuelers are specialized equipment and the ever present danger of fire or delivering contaminated fuel exists; this equipment shall be operated only by designated personnel who are properly indoctrinated and thoroughly experienced. Operators must be thoroughly familiar with traffic and vehicle regulations and normal safe driving practices and be familiar with the location and operation of valves, mechanical safety devices and fire fighting equipment.

2. Safety Precautions. General safety precautions pertaining to aircraft fuels handling are covered in reference (a) and Chapter 8 of this Order. Specific safety precautions applicable to mobile refueling and defueling operations are as follows:

a. Check exhaust pipes on mobile refuelers and defuelers to be sure that they do not have holes, cracks or breaks. Also inspect exhaust piping regularly to be sure that there are no large particles of carbon which might burn or glow.

b. No smoking within 100 feet of refuelers or defuelers.

c. Do not conduct fuel handling operations within 300 feet of ground radar equipment.

d. Never refuel aircraft inside a hangar or within 50 feet of a hangar.

e. The refueler operator shall be certain that the aircraft is properly located away from all possible sources of ignition. If not, refueling must be delayed until the aircraft is moved or the ignition sources eliminated.

f. Park the refueler as far from the aircraft to be filled as the hose will permit. Refueler will be parked in a position so that it may be quickly driven away in the event of a fire. (This means the refueler will normally be parked parallel to, or headed away from, the wing). There must be no obstructions in front of the refueler to prevent it from being driven away in an emergency.

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g. Insure both refueler and aircraft are properly grounded.

h. After unreeling the fuel hose and before use, the hose nozzle must be brought in contact with some metal part of the aircraft away from the fuel tanks to ensure that no differential in static electricity exists.

i. Refueler operators will not back a refueler or defueler at any time unless there is a guide present to assist.

j. When refueling aircraft, the driver or pump operator will stand by the refueler truck or pump during the entire refueling operation.

k. Aircraft will not be refueled within 100 feet of liquid oxygen pumping operations.

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CHAPTER 5

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## STANDING OPERATING PROCEDURES FOR FUELS BRANCH

## CHAPTER 5

## FILLING INSTRUCTIONS FOR MOBILE REFUELER SYSTEM

5001. FILLSTAND OPERATIONS. Certain basic instructions must be followed as routine standing operating procedures at all tank truck fillstands to ensure safety and efficiency of operations. The sequence of these instructions are as follows:

1. The truck driver shall stop the engine immediately upon entering the fillstand and will secure the brakes. All electrical apparatus will be turned off.
2. Check to ensure that the fuel to be loaded is the type of fuel marked on the refueler. Only the type of fuel marked on the refueler may be loaded into that refueler.
3. Connect the grounding wire to the refueler body at an unpainted point before attaching loading arm. Do not connect the grounding wire near the dome cover or any point on the refueler near any opening from which fumes may escape. The connecting point must be bare metal and provide a positive grounding connection.
4. The driver/fillstand operator will check the meter and reset it to zero before commencing loading operations.
5. The driver/fillstand operator will set fillstand pumping switches to the "ON" position.
6. The driver/fillstand operator will connect the fillstand loading arm to the bottom loading valve on the refueler. The operator will then open the hand held loading arm valve and remain alert during the loading operation. If the operator must leave the loading arm, pumping will be stopped immediately. This is important to prevent an overflow from occurring.
7. The driver/fillstand operator will at no time block or secure the hand held loading arm valve in the open position.
8. When the refueler is filled, the loading arm valve will be secured, removed and returned to its proper storage position, and the pumping switches set to the "OFF" position.
9. Remove the ground wire.

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10. The driver/fillstand operator will observe the meter reading and record the amount pumped in the log book or on the form.
11. The driver will return the refueler to its parking location upon completion of the filling operation.

5002. FUEL SPILL/EMERGENCIES. The following procedures will be followed in the event of spills or emergencies:

1. If a spill occurs at the rack and the ground around the rack is impregnated with fuel, do not start the refueler motor or move it from the racks. To move the vehicle, call the Fire Department and under their supervision remove the refueler by towing. The area must be cleaned and the fumes safely evaporated before allowing refueler to drive in.
2. In the event of large fires enveloping both trucks and racks, if safely able, suppress the fire with foam carts, call the Fire Department and cut off valves governing the flow of fuel products to the rack. WARNING: If the fuel truck is almost empty when enveloped by fire, the danger of an explosion is eminent. Personnel must bear this in mind when attempting to control such a fire. If a fire should start at the manhole of an empty truck, the danger of explosion is eminent. Ensure that the grounding wire is always firmly attached to a metal unpainted portion of the truck body. This grounding wire rule applies to all trucks regardless of the product they are carrying.
3. Know where the shutoff valves are located in case of an emergency.

5003. MISCELLANEOUS

1. The following safety precautions will be adhered to during refueling operations at the fillstand.
  - a. Be continuously alert while at the fillstand for any situation that may affect the safety of the operation; especially ensure adherence to the "No Smoking" rule.
  - b. Keep all sources of ignition at least 100 feet from any loading or unloading operation.
  - c. The driver/fillstand operator will pump into the refueler only that amount of fuel which is authorized to be issued on the Refueler Issue Sheet. Any disparities will be brought to the attention of the Fuels Servicing Section NCOIC.

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## STANDING OPERATING PROCEDURES FOR FUELS BRANCH

### CHAPTER 6

#### AUTOMOTIVE SERVICE STATION OPERATIONS

##### 6000. GENERAL

1. Motor gasoline and #2 diesel fuel for government vehicles will be stocked and issued for Air Station and tenant activities. The service station is located in Building 620 across from the Public Works Office building and will be open during normal working hours. In cases of emergency issues, contact Fuels Day Tank, extension 7168/7338.

2. The vehicle operator will be responsible for the following:

a. Prior to refueling the vehicle, the operator will ensure that the ignition and all electrical accessories are turned off.

b. Prior to commencement of refueling, the operator will clear and reset the pump meter.

c. Under no circumstances will the pump handle be wedged or otherwise secured in an open position by any means. The operator must monitor the filling, and operate the pump by hand.

d. Upon completion of filling, the operator must verify all entries on the Single Line Requisition Form DD 1348 or Into-Plane Sales Slip 1898, and sign it.

3. The automotive service station operator will be responsible for the following:

\* a. Ensure that self-service islands are stocked with dry sweep, and air/water is available.

b. Ensure the following information on the Single Line Requisition Form DD 1348 or DD Form 1898 is properly filled in:

- (1) Activity to be charged
- (2) Date/Time
- (3) Quantity of fuel
- (4) Type of Fuel
- (5) USMC vehicle number
- (6) Vehicle mileage

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c. Single Line Requisition Form DD 1348 will be used for all bulk issues of automotive fuels.

4. Safety. The following basic safety regulations will be strictly adhered to:

a. Vehicle ignition and all electrical accessories will be turned off prior to servicing vehicle.

b. No smoking or open flames within 100 feet of self-service islands.

c. Maintenance other than routine service checks will not be performed within 50 feet of the self-service islands.

d. Normal fuel handling safety precautions prescribed in reference (a) and Chapter 8 of this Order will be followed during refueling operations.

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CHAPTER 7

BULK FUEL OPERATIONS

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### CHAPTER 7

#### BULK FUEL OPERATIONS

7000. GENERAL. MoGas, #2 diesel, and JP-5 are available from the Fuels Branch on a bulk issue basis to all station and tenant activities.

7001. SPECIFIC The following procedures will be followed in bulk issue of aviation and ground support fuels:

1. A MILSTRIP requisition (DD Form 1348) will be prepared in accordance with the standard MILSTRIP procedures by the using unit and presented to the fuels operator at the time of issue.

\* 2. All safety regulations and filling procedures for mobile refuelers outlined in Chapters 4 and 8 of this Order will be strictly followed. MoGas and #2 diesel will be issued at the truck fillstand located at the Automotive Service Station, building 620, during normal working hours. The duty person at Day tanks, Bldg 552, ext. 6224/6820/6822/6823 will make emergency issues of Mogas and Diesel after hours, weekends and holidays upon instructions from the Marine Corps Air Station Officer of the day. The duty person ext. 6224/6820/6822/6823 will issue JP-5 at any time. Whenever possible, bulk issues will be made during normal working hours.

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CHAPTER 8

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## STANDING OPERATING PROCEDURES FOR FUELS DIVISION

### CHAPTER 8

#### SAFETY IN FUEL HANDLING OPERATIONS

8000. GENERAL INFORMATION. The greatest danger associated with aircraft fuels is during handling operations. Failure to comply with safety precautions could jeopardize the total fueling operation, resulting in the possible loss of life, injury and/or destruction of valuable property.

8001. ELIMINATING SOURCE OF IGNITION. Specific procedures and precautions to prevent sources of ignition are as follows:

a. Aircraft radars and other energy emitters will be secured prior to refueling. Only those electrical systems that are essential to the fueling and aircraft safety may remain activated.

b. During local electrical storms (within 5 nautical miles), all refueling operations will cease until cleared by the Airfield Operations Duty Officer.

c. Never wear shoes with exposed nails, metal plates or hobnails. Proper shoes will be provided by the parent organization prior to each individual's assignment to the Air Station in a FAP status.

d. Do not carry loose metal objects such as knives, keys or other objects which might produce sparks. Also, be careful of metal belt buckles and buttons on clothing.

e. Keep all grounding and bonding connections clean, implanted and in good condition.

f. Never begin fuel handling operations until all equipment is properly grounded and bonded.

g. No open fires, matches, cigarettes, lighters, oil lanterns or similar flames within 100 feet of fuel handling operations is allowed.

h. Use only flashlights, drop lights, etc., approved by proper authority for use in hazardous locations.

i. Be certain repair work is not being performed on the aircraft before beginning the refueling or defueling operation. This does not preclude normal pre- or post-flight inspection procedures.

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j. Be certain that no internal combustion engines are operating within 100 feet of fuel handling operations. The exception is an engine that is necessary for the refueling or defueling operation which is specially equipped with spark arrestors and other safety equipment.

k. No engine shall be started or stopped regardless of its configuration within 50 feet of a refueling or defueling operation. This prohibition includes the aircraft being serviced and adjacent aircraft within a 50 foot radius.

8002. MISCELLANEOUS PROCEDURES TO PREVENT FIRES AND EXPLOSIONS.

In addition to preventing ignition sources, there are other miscellaneous procedures which are important in preventing fires and explosions. These are:

1. Only aircraft with safe ordnance installed shall be refueled. Safe ordnance is defined as any and all blue marked rockets, bombs or missiles that are pinned, and include racks and pods.
2. Service nozzles (low speed hand nozzles) will not be jammed or wedged open during refueling operations but shall be held by hand pressure only until refueling is completed.
3. All personnel working in the vicinity of the flight line will wear approved ear protectors when aircraft are operating.
4. If any malfunction occurs during fueling, i.e., fuel leakage or failure of the primary or secondary test switches, the fueling shall cease and the aircraft shall be moved from the station.
5. Fueling of subsequent aircraft shall be stopped when fuel spillage, over 6 feet in diameter, occurs from aircraft overboard drains or vents until the area has been thoroughly cleaned.
6. All personnel not required for refueling operations shall remain clear of the area and of the aircraft being refueled.
7. Keep all equipment clean and in good mechanical condition.
8. Be certain that fire fighting equipment and exiting gushers are in good condition and readily available.
9. Before beginning any refueling operation, all the required items on the check list must have been performed and complete.
10. Personnel will not remain in the aircraft unless it is essential to the refueling operation.