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Maintenance

**CONTROL, IDENTIFICATION, AND
MAINTENANCE OF AGE**

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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This instruction implements AFPD 21-1, *Managing Aerospace Equipment Maintenance*, and prescribes procedures for request, use, control, dispatch, and return of aerospace ground equipment (AGE). It also establishes responsibilities and procedures for maintenance and status reporting of all AGE. It applies to all personnel assigned to Elmendorf AFB and all host, associate, or temporary duty (TDY) organizations maintaining or requiring the use of AGE. Supervisors will ensure strict compliance with this instruction and applicable directives. It's used in conjunction with technical orders (TO) 00-20-7, *Inspection System, Documentation, and Status Reporting for Support and Training Equipment*; TO 42B6-1-1, *Quality Control of Oxygen Propellant Liquid Oxygen, Aviators Liquid Breathing Oxygen, and Aviators Gaseous Breathing Oxygen*; AFI 25-201, *Support Agreements Procedures*; AFPSH 127-100, *Aircraft Flight Line - Ground Operations and Activities*; and PACAFI 21-101, *PACAFI Aircraft Maintenance Organization and Procedures*. This publication does not apply to the US Air Force Reserve or Air National Guard units or members.

1. General:

1.1. AGE will be assigned to the 3rd Equipment Maintenance Squadron (EMS) for maintenance and control. The 3 EMS AGE Flight will have custodial responsibility for all powered/ nonpowered AGE. The only exceptions to this will be equipment allotted under table of allowances not authorized for use by AGE. The using organization/shop will provide written justification for powered/nonpowered requirements exceeding current authorizations. The 3 EMS AGE Flight (3 EMS/LGMG) will assign field numbers in accordance with PACAFI 21-101.

1.2. Organizations with known recurring requirements for AGE will justify this equipment through Air Force supply sources. The 3 EMS AGE flight will provide technical assistance.

2. Procedures/Responsibilities:

2.1. The 3 EMS/LGMG will provide a driver and tow vehicle for each flying squadron for the movement of powered AGE. The AGE Flight will assign equipment to an organization by color code and field numbers. Color codes will be as follows:

- 2.1.1. 632nd Air Mobility Support Squadron (AMSS) – White.
- 2.1.2. 517th Airlift Squadron (AS) - White.
- 2.1.3. 19th Fighter Squadron - Blue.
- 2.1.4. 12th Fighter Squadron - Gold.
- 2.1.5. 90th Fighter Squadron - Red.
- 2.1.6. 962nd Airborne Air Control Squadron (AACCS) - Green.
- 2.1.7. 3rd Wing Base Support/Transient Alert - Orange.
- 2.1.8. COPE THUNDER - Black.

NOTE:

The AGE driver will respond to powered AGE movement requests from the flying squadron expediter and Maintenance Operations Center (MOC). When not tasked to move powered AGE, the driver will return to the servicing facility or Combat AGE Team (CAT).

2.2. Organizations requiring temporary use of AGE for other than flight line use will submit justification for their requirements by letter to the AGE Flight Chief and Superintendent at least 7 days prior. All equipment used off the flight line will be returned to the AGE Flight by the using organization.

2.2.1. When an organization has a request approved, they will send an appropriate tow vehicle and qualified operator to the AGE Flight (Building 8-326) to sign for the loaned equipment. AGE will be issued on an AF Form 1297, *Temporary Issue Receipt*. Requesting organizations will not preselect or receive equipment until it has been properly receipted.

2.2.2. Equipment requiring fuel will be routed through the appropriate CAT for servicing and inspection.

2.3. Users will check AGE for serviceability prior to use. Discrepancies will be documented on AFTO Form 244, *Industrial/Support Equipment Record*. If a discrepancy renders the equipment unusable, the user will immediately report the discrepancy and field number to the AGE Servicing Facility or CAT for repair or replacement. Users will notify the dedicated AGE driver or appropriate CAT of fuel levels below 1/4 tank or oil level below “low” mark. Users will also notify the dedicated AGE driver or appropriate CAT of all equipment not in use.

2.4. The flying squadron expediter will notify the dedicated AGE driver when the movement of powered AGE is required. Users will have AGE positioned for expedient pick-up, to include properly stowing hoses and cables, dust and rain caps, and moving equipment outside the 10-foot aircraft circle of safety.

2.5. The Squadron Maintenance Officer must approve locally manufactured AGE after both Group Quality Assurance offices have validated the requirements of the nonstandard items. Locally manufactured AGE will be identified, maintained, and controlled by the user. The function responsible for maintenance of the unit is also responsible for obtaining inspection criteria for the nonstandard item in accordance with TOs 00-20-7 and 34-1-3, *Inspection and Maintenance and Shop Equipment*.

2.6. During periods of dissimilar aircraft combat training (DACT) and deployment exercises, flying squadrons must emphasize management of support equipment inventories to minimize the impact on day-to-day operations.

2.7. Bomblift Procedures:

2.7.1. Bomblifts will be signed out on AF Form 1297 from the AGE Servicing Facility or appropriate CAT supporting their squadron. Operators will select a bomblift from the ready line, perform a “prior to use” inspection before starting the unit, and deliver the forms to the AGE supervisor. The AGE supervisor will check the bomblift forms while the operator is signing them out in the log. The AGE supervisor will also check the Core Automated Maintenance System (CAMS) terminal to ensure the individual is qualified to operate bomblifts. If the individual’s name is not in CAMS, and a phone call to 3 LSS/LGQT confirms individual has not been qualified to operate the bomblift, they will not be allowed to check out the bomblift.

2.7.2. If a bomblift becomes inoperative during use, the operator will annotate the discrepancy in the unit forms and notify the dedicated AGE driver or servicing CAT the bomblift is unserviceable and cannot be started or moved. It’s the user’s responsibility to refuel the units and to check engine oil and hydraulic fluid levels.

2.7.3. After initial dispatch from the AGE facility, the supervisor of using personnel will oversee control of the bomblift within the maintenance complex.

2.7.4. Bomblifts will be returned to the AGE facility at 7-day intervals to ensure serviceability and compliance with service inspections.

2.7.5. Under no circumstances will a bombloader driver “exit the operator seat” of the unit with the engine running. AGE maintenance personnel are excluded from this requirement when performing maintenance and weight test.

2.8. Damaged/abused equipment will be reported to the AGE Servicing Facility or servicing CAT immediately upon discovery. The individual discovering damaged/abused equipment will enter the appropriate symbol and discrepancy on the equipment form (AFTO Form 244).

3. Nonpowered AGE Procedures:

3.1. Nonpowered aerospace ground equipment (NPAGE) subpools are located:

3.1.1. Outside northeast corner of Hangar 1.

3.1.2. Outside north side of Hangar 4.

3.1.3. North side of Building 9569 (AGE Servicing Facility).

3.1.4. East side of Hangar 8 for AACS.

3.1.5. Hardstand 12 for 517 ALS and 632 AMSS.

3.1.6. Southwest side of Hangar 15.

3.1.7. Cell 1 of Hangar 16.

3.1.8. East end of the base operations building and the west ramp.

3.1.9. Southwest corner of hangar 10 (For LOX Servicing).

3.2. Due to the criticality of axle jacks, these items will be issued to the respective flying squadron support sections on an AF Form 1297. Each flying squadron will be supplied with their assigned (color coded) hydraulic/oil carts and controlled by the flying squadron.

3.3. Users will:

3.3.1. Pick up and immediately return serviceable and unserviceable NPAGE to appropriate sub-pool area when not in use. Discrepancies will be documented on the AFTO Form 244. If a discrepancy renders the equipment unusable, the user will immediately report the discrepancy and field number to the AGE Facility for repair or replacement. **NOTE: Towing of Star Wars, Conformal Fuel Tank, and maintenance dollies requires the rear casters be locked prior to movement; failure to do so will cause equipment damage.**

3.3.2. Be responsible for the delivery of NPAGE for aircraft maintenance training and any ancillary training required.

3.3.3. Be solely responsible for servicing engine oil, hydraulic fluid, liquid coolant carts, and delivering fuel bowzers to defueling location.

3.4. Flying squadron maintenance personnel are responsible for the contents and the monitoring of fuel bowzers. No foreign substances will be placed in fuel bowzers, such as oil, hydraulic fluids, chemicals, hardware, safety wire, or trash. These contaminants will preclude the fuel from being recycled or reclaimed. All waste/reclaimable petroleum products will be disposed of by user personnel and all required documentation completed by the user. Users will also drain bowser sumps to remove water that could freeze and damage the equipment. An acceptable procedure for water disposal is outlined below:

3.4.1. The water/fuel mixture should be allowed to settle, allowing for complete water/fuel separation.

3.4.2. The water can then be drained into a small container and discharged to a drain that is connected to an oil/water separator which is in-turn connected to the sanitary sewer system.

3.4.3. Extreme care must be taken to ensure that only **WATER** is discharged to the drain. The oil/water separator should be loaded at a flow rate within its design parameters and flow should be stopped the moment the fuel interface is reached.

3.5. The respective CAT will notify users of aircraft bowzers when they are due for inspection at least 1 week prior to the inspection due date. The flight/shop chiefs of using organizations will ensure aircraft fuel bowser/s requiring inspections or repairs are towed and parked on the containment area at POL Farm 3 (located next to Hangar 1). POL personnel will sample and drain the bowser/s in accordance with TO 42B-1-23 and return the drained fuel to bulk storage.

3.6. Liquid oxygen, nitrogen, and SF-6 cart servicing is the responsibility of the user. The user is responsible to check quantity levels of liquid oxygen (LOX), gaseous oxygen (GOX), and nitrogen carts. The user will ensure the AFTO Form 134, *Aviator Breathing Oxygen Servicing Trailer Log (Liquid/Gaseous)*, is properly filled out and returned to the LOX/gaseous carts. Liquid oxygen and nitrogen cart servicing will be accomplished between 0700 to 0900 and 1300 to 1500 each flying day. Emergency requests may be called in through the MOC. Gaseous oxygen, nitrogen, and SF-6 bottles will be replenished by the user. The user will store, purchase, change, and account for **GOX/NITROGEN** bottles.

3.7. AGE personnel will coordinate all LOX and nitrogen cart inspections and maintenance through the appropriate shop (3 CRS Electro/Enviro and 3rd Supply Cryogenics). The dedicated AGE driver will route units to the appropriate shop for the following:

3.7.1. Oxygen/LOX/liquid nitrogen system due periodic inspection (PE) Environmental Control Systems (ECS).

3.7.2. Oxygen/LOX/liquid nitrogen cart system due purge (ECS).

3.7.3. Trailer due PE (AGE).

3.8. Routing for PE will be:

3.8.1. Environmental control system: unit must have at least 10 gallons and no more than 15 gallons. If quantities are not within the above range, the cart must be filled or drained accordingly.

3.8.2. ECS Plant will purge carts.

3.8.3. The AGE Flight will perform trailer inspection, have unit serviced at the LOX plant after inspection, and return unit to the flying squadron.

3.8.4. A forms jacket or tube, with AFTO Form 244, will be attached to each unit.

4. Cold Weather Operations:

4.1. At temperatures of +20 degrees Fahrenheit or below, maximum effort will be made to store all not-in-use powered AGE inside. Hangar exclusive equipment (electric hydraulic test stands, generators, air conditioners, etc.) will be moved outside of the hangar only for relocation to another hangar/maintenance facility or for repair pickup. In all cases, the dedicated AGE driver will be informed immediately to prevent cold soaking of equipment.

4.2. Care must be exercised to prevent unnecessary damage and wear to diesel-powered support equipment. Diesel engines will be started and warmed up, at low RPM, for at least 5 minutes before a load is applied. If the unit is required after completion of a job, it should be monitored and the engine allowed to idle in a "no load" condition until needed again.

4.3. Heaters in use will not be operated within 25 feet of aircraft or explosives. At temperatures of 32 degrees Fahrenheit or below, heater engines may be left running with **BURNER OFF**. Requesting individuals will monitor heaters for safe and proper operation.

5. Deployed AGE:

5.1. AGE required for deployment, site support, and so forth, will be processed for shipment by the AGE Flight. If AGE personnel are not accompanying the TDY, the squadron going TDY will assume custodial responsibility and submit a letter to the 3 EMS Commander stating the following: the deployed custodians' names, date trained, type of equipment, quantity, stock number, account number, and document number. The information for the last three items may be obtained from the appropriate CAT Manager. The letter will be taken to the equipment management section for processing by the custodian assuming responsibility, prior to departing with the equipment.

5.2. When equipment is to be returned from deployment, site, support, and so forth, the following will apply:

5.2.1. Equipment will be defueled, washed, and prepared for redeployment by AGE personnel with the assistance of deployed personnel. The deployed squadron assumes this responsibility when AGE personnel are not present.

5.2.2. All shipping arrangements will be made by Mobility noncommissioned officer (NCO) or ranking NCO of the deployment team.

5.3. Upon return from deployment, the Mobility NCO/ranking NCO of the deployed team will notify MOC, who will notify the AGE Flight Chief of return shipping arrangements. The Equipment Management Section will be notified of the returned equipment by the owning equipment account custodian.

6. Equipment Towing:

6.1. Qualified AGE tow vehicles are permitted to tow four heaters in tandem on the outer pintle hooks during winter operations, contingencies, and exercises. No more than two ground heaters may be towed on the pintle hook of other vehicles. Tandem loads will not exceed the load capacity of the tow vehicle. Loads, regardless of the number of the units being towed, will be kept symmetrical. Single units will be towed only on the center pintle hook. When towing two units, the preferred method is to use outside pintle hooks. When towing more than two units simultaneously, distribute the load as evenly as possible on each of the two outer pintle hooks.

6.2. Tandem towing is authorized providing the heaviest unit is nearest the tow vehicle. Four-wheeled units will not be towed behind two-wheeled units, except when specifically authorized.

6.3. Units will not be towed with the center and outside pintle hooks simultaneously.

6.4. Loads not to exceed 16,000 lbs will be towed with the center pintle hook.

6.5. Prior to any towing operation, the vehicle operator will:

6.5.1. Perform a walk-around of the equipment to ensure cables, ducts, doors, panels, and hardware are properly stored.

6.5.2. Ensure equipment is properly disconnected from the aircraft.

6.5.3. Check for foreign objects and visible signs of misuse or abuse.

6.5.4. Ensure pintle hooks in use are properly closed and safety pins installed and retained by friction.

6.5.5. Document all discrepancies.

7. Equipment Abuse/Misuse:

7.1. Equipment abuse/misuse will be reported to the using organization's commander for appropriate action and/or compensation to the Air Force for damage repair.

7.2. UNDER NO CIRCUMSTANCES WILL SUPPORT EQUIPMENT BE USED FOR PERSONAL REASONS OR GAINS. Violators will be subject to administrative/punitive action.

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Commander